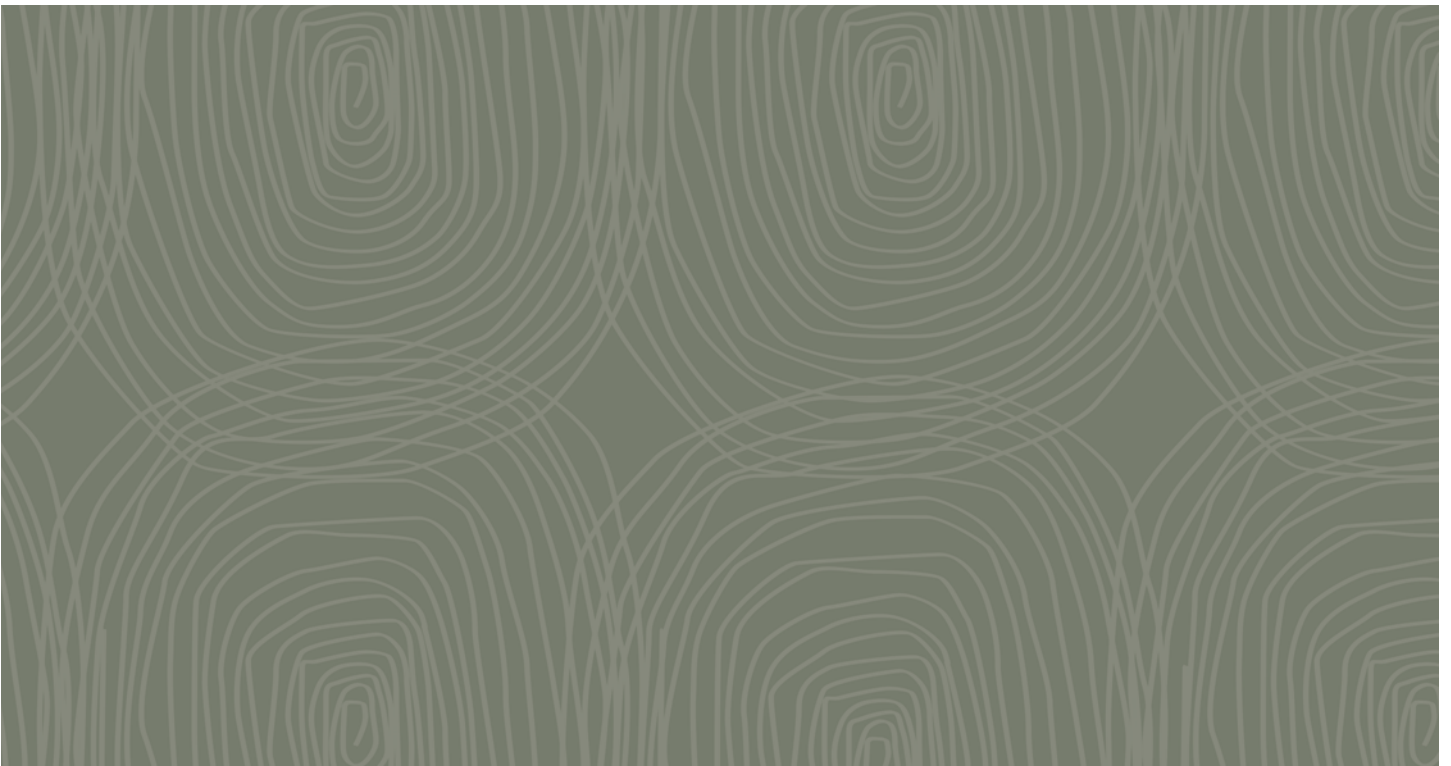


# T | Social





## Section 20 Social

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### 20.1 Overview of the Project

The proposed Kevin's Corner Coal Project (the Project) aims to develop a 30 million tonnes per annum (Mtpa) product open-cut and underground thermal coal mine to target the coal seams in the Upper Permian coal measures of the Galilee Basin, Queensland, Australia. At the Project site the coal will be mined, washed and conveyed to a train load-out facility where it will be transported to the east coast of Australia to the port facility of Abbot Point for export.

The Project will employ a combined workforce of approximately 2,500 at the peak of construction in 2014. Long-term employment during operations will be maintained at approximately 1,500 people per year for the Life of Mine (LOM), scheduled across a 30 year span. The Project will also create flow-on (indirect) employment opportunities for the region. These are approximate numbers as the exact numbers are likely to change, but within the anticipated range for the final workforce.

The Project will accommodate the majority of the construction and operational workforce in an on-site accommodation village within the Project boundary. The workforce is anticipated to be predominantly fly-in, fly-out (FIFO) due to the location and distances to population centres capable of accommodating such a large workforce. The Project will also have drive-in, drive-out (DIDO) opportunities for some local residents, and bus-in, bus-out (BIBO) opportunities from key regional centres. FIFO workers will be collected from key regional centres throughout Queensland based on workforce sourcing realities at the time, and flown to the on-site aerodrome for their work rotations. FIFO personnel will be transferred from the on-site airport to the on-site accommodation village via a mine-provided bus service.

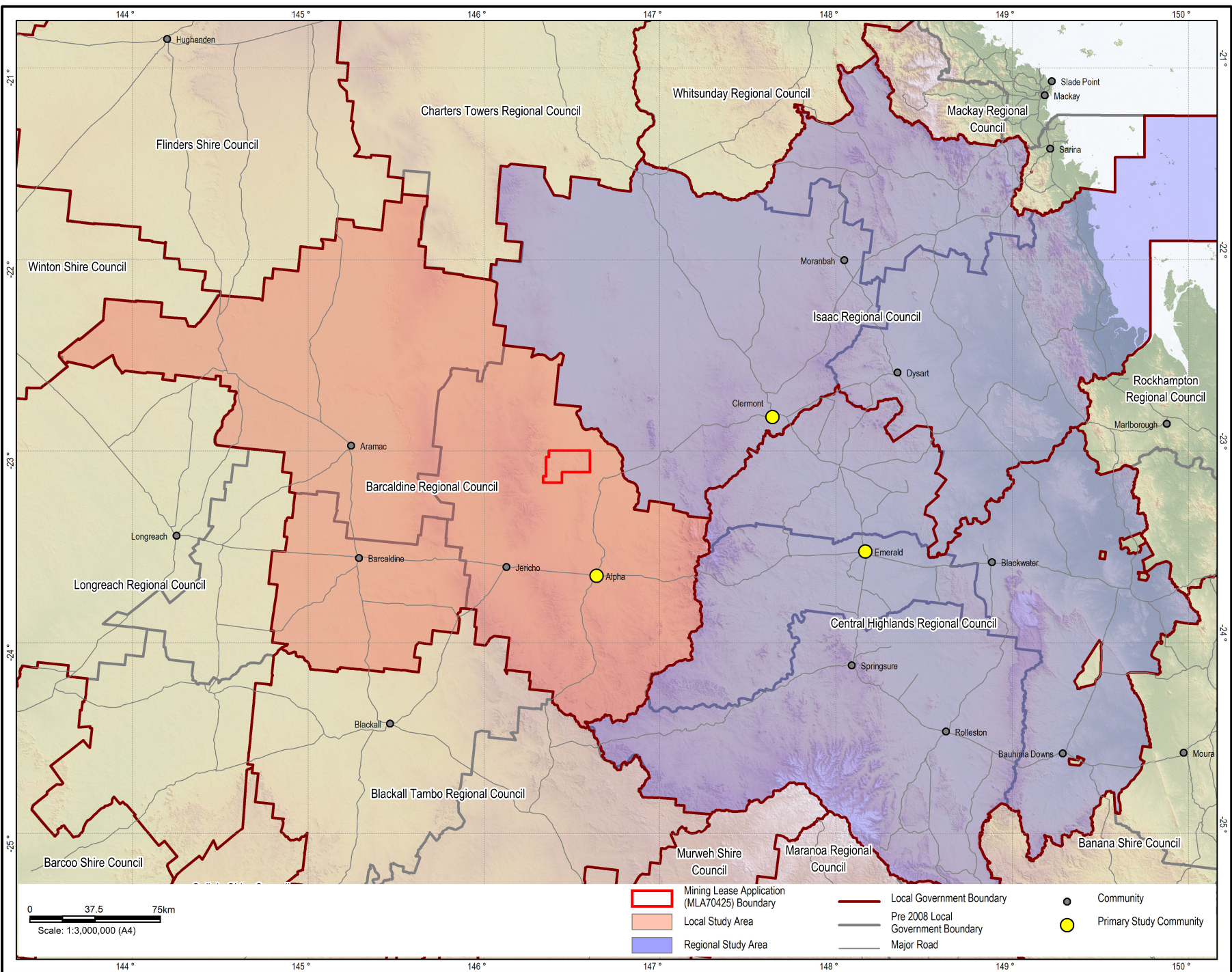
Hancock Galilee Pty Ltd (HGPL) (the Proponent), prefers to hire locally and regionally but has designed a mainly FIFO project with on-site accommodation in anticipation of the high likelihood workers will need to be sourced from outside the region. The rationale behind this workforce strategy is based on the existing low population base within the district as well as the limited relevant work experience within the local community. It is also likely that there will have been a drain on the potential pool of local workers as a result of the Alpha Coal Project. Further, Alpha is limited in its ability to attract new residents given its current lack of essential and other services, its proximity to the larger service centre of Emerald, and the existing nationwide trend of population movements away from rural towns to the cities and the coastal centres.

The regional study area includes Isaac Regional Council (closest community to the mine is Clermont), and Central Highlands Regional Council (closest service centre to the mine is Emerald). The local study area includes Barcaldine Regional Council, with the closest community to the mine being Alpha. Figure 20-1 shows these three study areas, as well as the Project location. Regional centres include communities like Brisbane, Rockhampton, Mackay, Townsville and Cairns; however, the exact regional centres to be used have not been determined for the Project at this stage. Potential FIFO airports will be identified based on workforce numbers from various regions throughout Queensland, and possibly Australia as a whole.



Potential social impacts during the construction and operational stages of the Project will be experienced within the following key social areas:

- History and Settlement;
- Demographic;
- Culture and Community Dynamics;
- Housing and Accommodation;
- Health, Wellbeing and Social Infrastructure;
- Education and Training;
- Labour Market and Employment;
- Industry and Business;
- Income and Cost of Living;
- Governance; and
- Primary Industry and Access.



Source: See Copyright Details below and for full disclosure Please Refer to the EIS Volume 1 - References

Datum: GDA94, MGA Zones



**Kevin's Corner Project**  
Environmental Impact Statement

**STUDY AREAS**

Job Number: 4262 6660  
Revision: B  
Date: 12-09-2011  
**Figure: 20-1**

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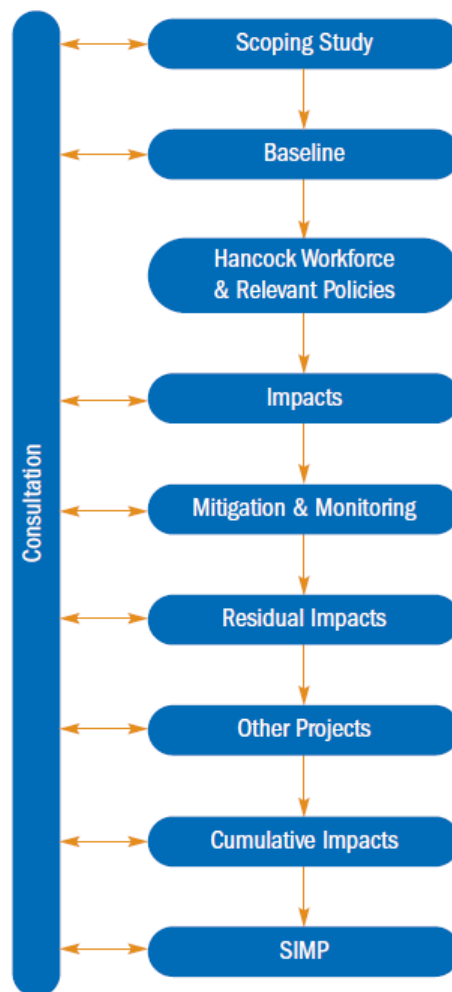
## 20.2 Introduction

The purpose of the Social Impact Assessment (SIA) is to address Part B, Section 4 of the Terms of Reference (TOR), titled *Social values and management of impacts*. The SIA focuses on the mine component of the Kevin's Corner Coal Project (the Project). The following provides a summary of the assessment and findings. The complete SIA can be found in Volume 2, Appendix T.

The social section of the EIS is presented as a summary of the key findings from the SIA. This section is written as a report for the public and focuses on each directly impacted community and council individually. The SIA is a technical report and presents data based on the study areas and the valued social components (social categories) examined. The SIA is seen as the primary document for the EIS.

The following methodology was implemented based on a standard approach to impacts assessment. Figure 20-2 illustrates the methodology used for the SIA.

Figure 20-2 Social Impact Assessment methodology flow diagram





This section is arranged in a different manner than the SIA technical report (see Volume 2, Appendix T). The baseline and impacts are presented together to allow the reader to transition from baseline data to impact without having to move between sections. The SIA technical report presents a more thorough assessment of the baseline, case studies, Project workforce and other details, and subsequent impacts assessment. It is recommended that this section only be read as a summary, not the full assessment.

### **20.2.1 Methodology**

The SIA has adopted the relevant International Association for Impact Assessment (IAIA) SIA principles, including the precautionary principle (i.e. a lack of understanding of social threats does not mean that there are no social threats) and the uncertainty principle (i.e. knowledge of the social domain will always be incomplete) when predicting social impacts. As such, the predicted social impact may change as more information about the Project is known (during the detailed design) and the Project is being constructed and operated. Therefore, actual social impacts of the Project are not known at the time of writing this section. A monitoring program has been developed based around recognised benchmarks in order to provide information on whether potential social impacts actually occur or not (see Volume 1, Section 29 of the EIS – Social Impact Management Plan [SIMP]).

The SIA for this Project is a cumulative assessment of the social impacts of the Kevin's Corner Project in addition to the social impacts that are deemed to be likely to have occurred as a result of the Alpha Coal Project. The rationale for this approach is that to be a viable project, the Kevin's Corner Coal Project is dependent on the rail infrastructure of the Alpha Coal Project. As such the scope of the SIA for the Kevin's Corner Project includes the Alpha Coal Project, and the SIA focuses on the successive, incremental and combined social impacts (Franks et al., 2010) that are likely to occur as a result of the Kevin's Corner Project in addition to the Alpha Coal Project.

This section follows the same methodology as the SIA but presents the data in a different way. The section is written as a quasi case study for the communities and councils identified in the SIA. The case studies are separated by study area. Each case study examines the key baseline data, followed by a summary of the impacts. Workforce and key Project details are presented prior to the case studies for context.

Below is a brief summary of the methodology undertaken for the SIA.

#### **20.2.1.1 Desktop Scoping Study**

The purpose of the scoping study was to develop a high level understanding of the proposed study areas and to gather information on the people and communities potentially affected by the Project. The objective was to identify what method of social assessment would be implemented and how to best collect data.

#### **20.2.1.2 Baseline Assessment**

The purpose of collecting baseline data was to establish a level of understanding of the study areas to meet the requirements outlined in the TOR. The type of information required under the TOR, the level of detail, and ratio between qualitative and quantitative data varies from project to project and community to community. A mixture of historical background, statistical information and local knowledge was collected with a focus primarily on the aspects of the community that could be impacted by the Project. Targeted information was collected to answer specific questions and fill data



requirements. This was generally achieved through interviews and questionnaires. Indirect information was also collected to identify aspects of the community not available through statistics and other available information sources. This generally covered the intangible characteristics of the community, such as community outlook, attitude, and emotions. The purpose was to capture the overall community characteristics to inform the analysis of potential impacts associated with the Project on the social environment.

#### **20.2.1.3 Case Studies**

Case studies were developed for similar areas in order to identify analogous situations to the impacts that could potentially occur in the study area. The following case studies were developed and considered in the drafting of the baseline and assessment of potential impacts:

- Insights and Lessons from the Example of Mining Developments at Springsure and Rolleston;
- Bowen Basin History and Development; and
- Strategic Community Development – A Study of Clermont.

#### **20.2.1.4 Project Workforce Details**

The purpose of defining the Project workforce was to develop an understanding of the workforce for various phases of the Project (construction, operation and maintenance, and closure) by identifying key variables relevant to the potential interaction with and impacts on the communities. The workforce numbers are approximations as the exact numbers are likely to change. The values included in this section are within the anticipated range for the final workforce.

#### **20.2.1.5 Impact Assessment**

The purpose of the impact assessment is to identify and evaluate the significance of any potential positive and negative impacts the Project could have on the community. The objective is to identify potential real and perceived impacts to the community and assess the magnitude and likelihood of each across spatial and temporal boundaries.

#### **20.2.1.6 Mitigation and Management**

The purpose of the mitigation and enhancement strategies presented in this section and the SIA are to develop means of reducing the effects of potential negative impacts while increasing the effects of positive impacts. The objective is to develop the Project with minimal negative impacts and maximum positive impacts whenever possible. Where applicable, linkages to existing local and State government, local service providers and private business programs and strategies were included. Best practices and successful strategies adopted in other projects and regions were included or identified as potential models where possible.

Monitoring and tracking programs have been identified as potential means to observe changes in the communities associated with the Project. Use of State and local government services specialising in the component to be tracked is the preferred option, with input and review by the Proponent.

#### **20.2.1.7 Other Projects**

As part of the SIA, proposed projects identified by the Department of Employment, Economic Development and Innovation (DEEDI) (formerly the Department of Infrastructure and Planning [DIP]) and the Proponent as likely to occur in the area during the same time-frame as the Project were



reviewed. The purpose was to develop an understanding of the other projects in order to inform the cumulative effects assessment. Information was requested at the same level of detail as presented for this Project in order to best assess potential impacts.

#### 20.2.1.8 Cumulative Impacts

The SIA for this Project has already been undertaken as a cumulative assessment, in consideration of the assumed impacts that are likely to have occurred as a result of the Alpha Coal Project. In addition, the cumulative impacts assessment reviewed the potential effects of the Project construction, operation and maintenance impact when considered with those from other projects identified by Department of Employment, Economic Development and Innovation (DEEDI) and the Proponent. Assumptions were required in order to conduct the assessment. The purpose of the cumulative impacts assessment was to identify areas of concern, areas of opportunity, and areas where cooperation could reduce potential negative impacts and enhance potential positive impacts arising from multiple projects.

#### 20.2.1.9 Social Impact Management Plan

A draft social impact management plan (SIMP) was identified in the TOR as a requirement for the SIA. This is presented in Section 29 of the EIS. The SIMP is modelled on the DEEDI (formerly DIP) SIA Unit Draft SIMP Guidelines and discussions with the SIA Unit. Modifications have been made to the SIMP format to better align with the SIA. The DEEDI SIA Unit has been consulted regarding the SIMP layout and contents.

The objective of the SIMP is to provide an effective management tool for Project impacts. Timing is an important factor to consider since the Project details can change. The SIMP is required to be adaptive, and re-examined for validity (frequency to be determined during Phase 2) and re-examined periodically throughout the life of the Project.

The SIMP is intended to support ongoing management of the potential social impacts of the Project. In recognition of the changing nature of impacts over the life of the Project, the SIMP will be adaptive and reassessed at regular intervals. Benchmarks will be established and monitored continuously throughout implementation and the management plan adapted as required. A review of the SIMP will be undertaken following each release of new census data and subsequently monitored using annual census updates to changes in the social environment or impacts, and at key dates specified in conjunction with the SIAU.

The SIMP is developed as a three phased approach:

- **Phase 1:** Develop the draft SIMP based on the SIA analysis and conclusions;
- **Phase 2:** Consult key stakeholders on the details of the SIMP, roles and responsibilities, benchmarks, reporting, monitoring and program evaluation; and
- **Phase 3:** SIMP implementation.

This approach was described to councils in the August and November 2010 consultation meetings as the preferred process for developing the SIMP for both the Alpha and Kevin's Corner Coal Projects. Continuing *ad hoc* discussions with the councils since those dates has built a common understanding in regards to this approach.



This phased approach for the SIMP means that as part of Phase 1, a foundation for the SIMP (i.e. a draft SIMP) has been developed, and is included in the EIS SIA (see Volume 1, Section 29). The goal of this is to develop a template which will be further developed within Phase 2, rather than a complete SIMP. Phase 2 will occur between EIS submission to the government and construction commencement. Phase 2 is the critical phase of the SIMP, where further details regarding the benchmarks, roles and responsibilities for the SIMP will be negotiated and finalised. Also, further details regarding the specific mitigation and enhancement strategies for each of the identified key impacts, focussed management strategies for key themes, and how all these elements align will be further developed in Phase 2. Phase 3 should occur within an agreed upon time prior to the commencement of construction, and preferably more than one month prior.

The Proponent envisions a coordinated SIMP finalisation approach with BRC, IRC and CHRC as well as other relevant stakeholders (where appropriate) in order to align the SIMP with council plans and programs. The objective is to leverage off the systems already in place. This process is yet to be determined, but could be coordinated through the proposed Hancock Consultative Committee or similar body (see Section 8 of the SIA – Volume 2, Appendix T).

For further details regarding the SIMP, see Volume 1, Section 29 of the EIS.

#### 20.2.1.10 SIA Consultation

The Kevin's Corner Coal Project SIA consultation was performed in line with the International Association for Public Participation (IAP2) Spectrum for Public Participation and concepts and designs within their certification course.

The SIA consultation was largely conducted in concert with general EIS consultation. This strategy was used to limit the number of consultation events in order to produce a more efficient program and reduce the potential for stakeholder fatigue. The SIA team and EIS consultation team shared the same members, which assisted in categorisation, interpretation, and analysis of data. This sharing of members was a further reason to conduct the EIS and SIA consultation together in order to reduce stakeholder confusion. Stakeholders were informed if the conversation was strictly for the SIA. For further information on the Kevin's Corner Coal Project EIS consultation process refer to Volume 1, Section 21.

The following means of stakeholder engagement were undertaken in order to inform the SIA:

- Community information sessions;
- Regional Council meetings;
- Regional shows;
- Targeted consultation; and
- Questionnaires.

There was also a 1300 free-call number, project website and individual business cards with contact information available to stakeholders.

## 20.2.2 Study Areas

Two separate study areas were identified for assessment (refer to Figure 20-1 above):

### Regional Study Area:

- Isaac Regional Council (IRC):
  - Primary focus on Clermont; and
  - Secondary focus on the rest of council.
- Central Highlands Regional Council (CHRC):
  - Primary focus on Emerald; and
  - Secondary focus on the rest of council.

### Local Study Area:

- Barcaldine Regional Council (BRC):
  - Primary focus on:
    - Alpha (State Suburb) and the mining lease area;
    - Directly affected homesteads/stations and properties; and
    - Indirectly affected homesteads/stations and/or properties.
  - Secondary focus on the rest of council.

## 20.3 Workforce Profile

The workforce profile provides a brief description of the key workforce details relevant to the Project SIA. Information was collected on anticipated workers based on the Proponent experience and recent similar projects in Queensland. The data is based on a probable scenario and may be different when actual contracts are negotiated.

### 20.3.1.1 Construction

The anticipated peak mine workforce during the construction phase is ~1,800 people, approximately a quarter of which will be on-site at any time. The overall construction workforce will be broken into two construction workforces throughout the construction phase of the Project:

- Group A (all other construction for the Mine Infrastructure Area (MIA) and Mine Enabling Infrastructure scope); and
- Group B (the Coal Handling and Preparation Plant [CHPP] workforce).

Table 20-1 below shows that within the nine year construction program, the estimated construction personnel peak is in year 3. The construction workforce will ramp up over a three year period before beginning to ramp down as civil earthworks activities are completed. These are approximate numbers as the exact numbers are likely to change, but within the anticipated range for the final workforce.

Table 20-1 Approximate construction personnel summary data by year

Personnel Data Summary	Construction year – Nine year construction period								
	1	2	3	4	5	6	7	8	9
Construction workforce total (persons)	1000	1500	1800	1500	1000	750	500	250	250

Source: HGPL



While the Proponent would like to recruit locally the reality is that limited numbers of personnel will be sourced from the local area because of the low population levels, as well as the likely drain on the existing pool of potential workers that would have occurred as a result of the Alpha Coal Project. Therefore, it is assumed that the majority of the construction workforce will originate from or at least depart for the mine site from South East Queensland (Brisbane). Previous experience of new mine developments suggest that a percentage will originate from Central and North Queensland regional centres such as Mackay, Rockhampton, and Townsville. It is therefore likely that approximately 95% of the construction workforce will be brought to the site using FIFO arrangements from South East Queensland, other regional areas of Queensland and the rest of Australia.

It is expected that the workers will be predominately in the 20 - 35 age group and the majority will be male. Given their age profile, it is likely that a large proportion of these employees will be either single with no dependents, or have young families.

The accommodation village will be large enough to accommodate all workers, allowing for both shifts of each group to be on-site for an overlap period of three days. All personnel will be required to stay at the accommodation village site for the entire duration of a roster unless otherwise agreed with site management.

Given the distance of the Project site from port and transport centres such as Mackay, Townsville and Rockhampton, it is likely that driving to the site and unloading equipment from the truck will fill the majority of an allowed shift (e.g. 12 -14 hours). As such, additional accommodation will be available in the on-site accommodation village sufficient for anticipated numbers of transport personnel. In an effort to reduce the amount of Project related traffic using roads around the area, bus services will be provided from a number of regional centres to transfer workers to site. The bus collection locations and routes will be dependent on the actual workforce composition but are likely to cover Mackay, Townsville, Rockhampton, Emerald, Clermont and Barcaldine, potentially stopping in other towns to collect workers as required. Once at the Project site, personnel will be restricted from leaving the mining lease area. The bus service will transport personnel back to their home towns upon completion of their shift rotation.

Some construction personnel recruited from the local study area, the regional study area, and Central/North Queensland will drive to site, arriving at the accommodation village the day prior to their shift commencing. Workers wishing to drive to site will need specific approval from the Project site management. This will be assessed on a case-by-case basis. All workers who drive to work will still be restricted from leaving the Project site without prior approval during a shift rotation. All FIFO personnel will be transferred from the on-site airport to the on-site accommodation village via a mine-provided bus service.

Based on industry practice and consultation with the Project team, the likely rosters will be one 12 hour shift per day, over a 21 days on and 7 days off (21/7) roster for all construction workers. Roster rotations will occur during the week encouraging workers to have regular weekends at home.

The base annual salary ranges are summarised in Table 20-2.

Table 20-2 Annualised labour costs

Category	Amount Each	Coverage
<b>Staff Level 1</b>	<b>\$85,000 - \$140,000</b>	<b>Blast Labourer, Electrician, Engineer etc</b>
<b>Staff Level 2</b>	<b>\$160,000 - \$230,000</b>	<b>Senior Geologist, Training Manager, Safety Manager etc</b>
<b>Staff Level 3 &amp; 4</b>	<b>\$230,000 - \$400,000</b>	<b>Maintenance Manager, Mine Manager, General Manager etc</b>

Source: HGPL

Individual annual costs for the award labour are summarised in Table 20-3.

Table 20-3 Award labour annual costs

Category	Amount Each	Description	Application
<b>Shift Operator</b>	<b>\$154,344</b>	<b>12 hour continuous roster</b>	<b>Blast crew, trades pit services crew</b>
	<b>\$161,620</b>	<b>12.5 hour continuous roster</b>	<b>Production equipment operators</b>
<b>Maintenance</b>	<b>\$154,344</b>	<b>12 hour continuous roster</b>	<b>General fleet maintenance</b>

Source: HGPL

The award labour costs have been applied to the individual items of equipment on an hourly basis.

### 20.3.1.2 Operations

Operations are due to commence at the end of year 3 (of construction), and construction will continue on through to year 9. Operations ramp up to full production by year 8 with a peak operations workforce of ~1,800, as shown in Table 20-4 below. The operational workforce will increase as production commences, and as open-pit boxcuts are established. These are approximate numbers as the exact numbers are likely to change, but within the anticipated range for the final workforce.

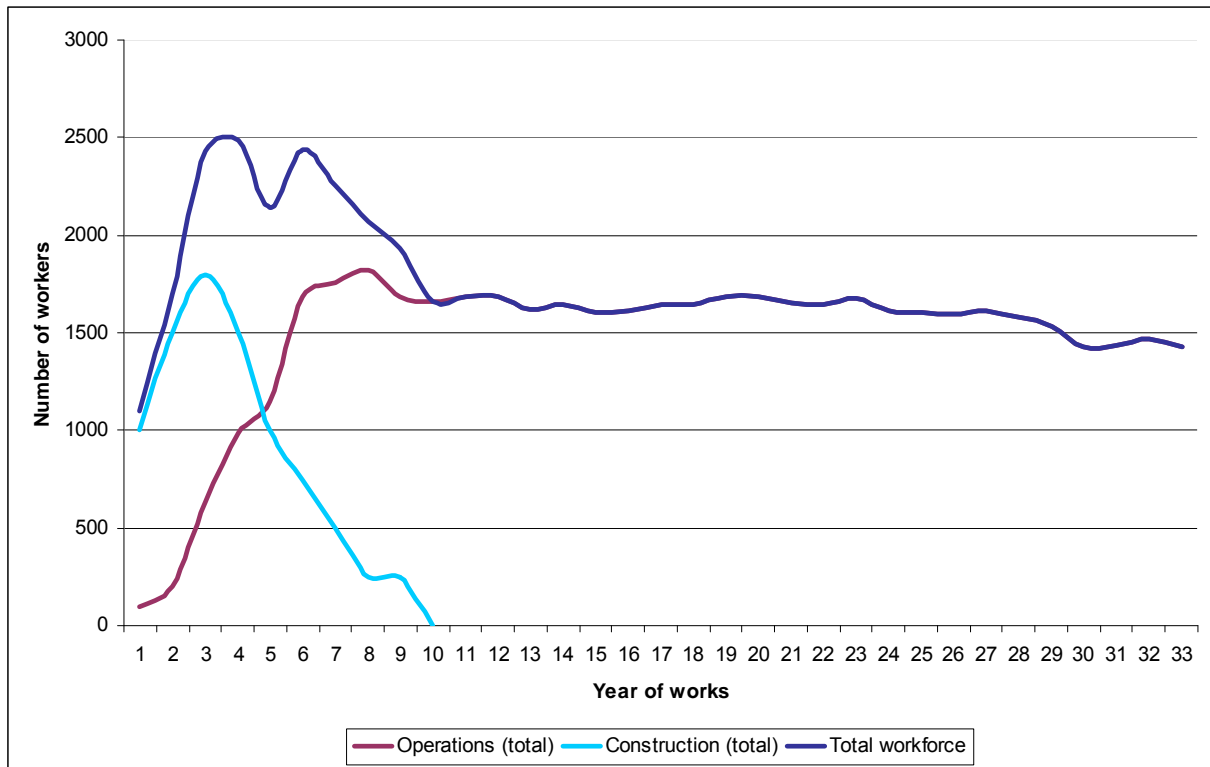


Table 20-4 Kevin's Corner Coal Project, operation workforce numbers

Personnel Data Summary	Year of works										
	1	2	3	4	5	6	7	8	9	10	11
<b>Total</b>	<b>100</b>	<b>200</b>	<b>634</b>	<b>987</b>	<b>1144</b>	<b>1687</b>	<b>1754</b>	<b>1822</b>	<b>1684</b>	<b>1658</b>	<b>1684</b>
<b>Operations - General &amp; CHPP</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>150</b>	<b>150</b>	<b>150</b>	<b>150</b>	<b>150</b>	<b>150</b>	<b>150</b>	<b>150</b>
<b>Operations - Surface Mining</b>	<b>-</b>	<b>100</b>	<b>458</b>	<b>460</b>	<b>460</b>	<b>569</b>	<b>540</b>	<b>453</b>	<b>315</b>	<b>334</b>	<b>320</b>
<b>Operations - Underground</b>	<b>-</b>		<b>76</b>	<b>377</b>	<b>534</b>	<b>969</b>	<b>1064</b>	<b>1219</b>	<b>1219</b>	<b>1174</b>	<b>1214</b>
Personnel Data Summary	Year of works										
	12	13	14	15	16	17	18	19	20	21	22
<b>Total</b>	<b>1686</b>	<b>1623</b>	<b>1645</b>	<b>1601</b>	<b>1614</b>	<b>1644</b>	<b>1646</b>	<b>1686</b>	<b>1684</b>	<b>1656</b>	<b>1646</b>
<b>Operations - General &amp; CHPP</b>	<b>150</b>	<b>150</b>	<b>150</b>	<b>150</b>	<b>150</b>	<b>150</b>	<b>150</b>	<b>150</b>	<b>150</b>	<b>150</b>	<b>150</b>
<b>Operations - Surface Mining</b>	<b>322</b>	<b>330</b>	<b>330</b>	<b>326</b>	<b>317</b>	<b>337</b>	<b>360</b>	<b>384</b>	<b>386</b>	<b>384</b>	<b>380</b>
<b>Operations - Underground</b>	<b>1214</b>	<b>1143</b>	<b>1165</b>	<b>1125</b>	<b>1147</b>	<b>1157</b>	<b>1136</b>	<b>1152</b>	<b>1148</b>	<b>1122</b>	<b>1116</b>
Personnel Data Summary	Year of works										
	23	24	25	26	27	28	29	30	31	32	33
<b>Total</b>	<b>1677</b>	<b>1613</b>	<b>1602</b>	<b>1596</b>	<b>1611</b>	<b>1578</b>	<b>1531</b>	<b>1425</b>	<b>1440</b>	<b>1465</b>	<b>1430</b>
<b>Operations - General &amp; CHPP</b>	<b>150</b>	<b>150</b>	<b>150</b>	<b>150</b>	<b>150</b>	<b>150</b>	<b>150</b>	<b>150</b>	<b>150</b>	<b>150</b>	<b>150</b>
<b>Operations - Surface Mining</b>	<b>439</b>	<b>447</b>	<b>451</b>	<b>445</b>	<b>462</b>	<b>451</b>	<b>440</b>	<b>447</b>	<b>440</b>	<b>442</b>	<b>430</b>
<b>Operations - Underground</b>	<b>1088</b>	<b>1016</b>	<b>1001</b>	<b>1001</b>	<b>999</b>	<b>977</b>	<b>941</b>	<b>828</b>	<b>850</b>	<b>873</b>	<b>850</b>

Figure 20-3 illustrates the construction workforce, operations workforce and the total workforce numbers per year.

**Figure 20-3 Kevin's Corner Coal Project, operation, construction and total workforce numbers**



There is currently limited relevant experience within the local study area, with only 0.7% of all employed people employed in the mining sector. This combined with a low population base, existing skills shortages in the region, and the likely drain on the existing pool of potential workers due to the already operational Alpha Coal Project, makes it impossible to source the operations workforce from the local study area. Despite the vast coal mining experience in the regional study area, the small population and high employment will impact on the ability of the Proponent to attract suitably qualified workers from within the regional area. Because of this, it is expected that the majority of the Project's operational personnel will be recruited from outside the area, including South East Queensland and the rest of Australia.

Basing assumptions on the experience of other mines in the region and across Australia, it can be assumed that the profile of the workforce will be predominately from the 25 – 35 year old age groupings with a male majority (although the adoption of proactive recruitment policies and a commitment to training can make this more even) as in the case of Clermont Coal Mine Project (CCMP). Given their age-grouping it is probable that a large number will have young families, while others will be single. The home community of the operational personnel will vary from small and medium sized rural and mining communities located in central and north Queensland, agricultural communities located in the western part of BRC and larger urban centres such as Mackay, Townsville, Brisbane, and beyond.



The final transport and logistical arrangements for the operational workforce will be based on the home community of the workforce and confirmed during mine start up through a consultation program.

There will be a policy on daily hours worked, and a policy on travel time to be developed prior to commencement of operations. As a result, only people who live within a 100 km radius of the mine site will be able to drive to and from work on a daily basis – i.e. in Alpha, Jericho or Anakie. This policy will be finalised prior to the commencement of operations in consultation with BRC as part of Phase 2 of the SIMP.

Personnel recruited from within the regional study area – particularly Emerald or Clermont, but also other towns, will likely use BIBO to be transported to the site for their work rosters. The BIBO service is anticipated to collect personnel from designated pick-up points in selected towns and regional centres according to an established timetable and transport them to the on-site accommodation village. In some circumstances, employees from the regional study area may wish to drive their own cars to work prior to commencing a roster. Such cases will be limited and will require prior approval from site management.

The majority (at least 95%) of the workforce will be transported by FIFO from Brisbane and potentially other regional centres such as Mackay, Rockhampton and Townsville. FIFO transfers will operate on certain days which will be determined based on aircraft/service availability and requirements of other FIFO operations in the region.

There is also the potential to use light aircraft to transport personnel from smaller regional towns such as Clermont. Options for this will be explored further as the workforce employment is commenced.

As with other mines the scheduling and determination of rosters and rotations will be based on the requirements of the position. For example some positions may require personnel to work nine-days on, five days off (9/5) roster, while others may be more flexible and a 14 days on, seven days off (14/7) or a seven days on, four days off (7/4) roster adopted.

Exact shifts/roster rotations will be determined by consultation at the start up of the mine.

Operational personnel will be accommodated in an on-site accommodation village which will be located approximately 10km from the mine, off the site access road and before the Jericho-Degulla Road Deviation where the disturbance to off-duty employees from noise, vibration and light will be minimal. The accommodation village will be designed and constructed to fit in with the environment and will include comfortable, en-suited accommodation, catering facilities and appropriate recreational facilities.

The operation salary is captured with the construction salary in Section 20.3.1.1.

## **20.4 Regional Study Area**

This overview of the regional study area presents key baseline data, potential impacts and mitigation per regional council and key community. The SIA technical report in Volume 2, Appendix T presents the data in a more traditional format where baseline, impacts and mitigation are separated into different sections. This section examines the communities and councils as a whole. The regional study area as described in Section 20.2.2 above includes and assessment of the Isaac Regional Council (IRC) focusing on Clermont and the Central Highlands Regional Council (CHRC) focusing on Emerald.

## 20.4.1 Clermont and Isaac Regional Council

### 20.4.1.1 History and Settlement

#### Baseline

Isaac Regional Council (IRC) came into existence in March 2008 as a result of the amalgamation of the Belyando, Broomsound and Nebo shires following the Local Government Reform Commission report released in July 2007. All three shires had traditional links to grazing, agriculture and mining (Isaac Regional Council, 2010). Plate 20-1 shows what a typical rural residential property looks like in the south-western portion of IRC near the Clermont area.

**Plate 20-1 Typical rural residential property**



Source: HGPL

Located in central Queensland, the IRC covers an area of 58,862.0 km<sup>2</sup> representing 3.4% of the total area of the state (Office of Economic and Statistical Research [OESR], 2 July 2010). IRC stretches from “Coal to Coast” in central Queensland and includes the townships of Clermont, Dysart, Glenden, Middlesmount, Moranbah, Nebo, Coppabella, St Lawrence, Camila, Clairview, Greenhill and Ilbilbie.

The Bowen Basin which contains significant mining reserves and associated mining communities, covers an area of approximately 60,000 km<sup>2</sup> of central Queensland, from Collinsville in the north to Theodore in the south and has the largest coal reserves in Australia. The Bowen Basin provides approximately 83% of Queensland’s total coal production, the state’s most important export commodity. Much of the Bowen Basin lies within IRC boundaries. While many of the currently operating mines have only opened in the last decade, the Bowen Basin has been a major force in mining for well over a century (Mining Communities Research Exchange, 2010).

The area was first settled by pastoralists in the 1860s; however, shortly after, the discovery of copper and particularly gold, brought droves of prospectors to the area. The recent history of the area is one of highly successful mining operations, with some 49 coal mines and 25 mineral mines currently operating in the IRC area. The IRC reported that mining accounted for 76.1% of the council’s Gross Regional Product (GRP) in 2007 – 2008 (Marshall, 2010).

Although Clermont was first explored by Ludwig Leichardt in 1845, it was William and Charles Archer (from the family who established the port of Rockhampton) who recognised the area’s grazing potential and in 1856-57 returned to claim large tracks of land. In 1861 a group of shepherds found



gold by the side of Hoods Lagoon and prospectors were lured to the area and Clermont established, forming the first inland settlement north of the Tropic of Capricorn.

The name Clermont, gazetted in 1864, comes from Clermont-Ferrand in France, the home of Oscar de Satgé, who owned Wolfgang Downs (a nearby station) at the time (SMH, 2004). Soon after settlement, copper was discovered and during the 1880s up to 4,000 Chinese lived in Clermont mining for gold and copper. Like many similar communities at this time, Clermont experienced some nasty race riots. Culminating in 1888 when Chinese prospectors were removed from the region (SMH, 2004). The regional railway line was extended north to Clermont from Emerald in 1884; however, no passenger trains run on this route. Today Clermont serves as a hub for the surrounding coal mines and agricultural holdings.

### Impacts and Mitigation

The Project is not anticipated to change the perception of IRC or Clermont as both are already viewed as areas with a mix of agriculture and mining. The Project is also outside the region though it is potentially accessible via the Alpha-Clermont Road (also referred to as the Clermont-Alpha Road); however, this road would require upgrading to be Project compliant in terms of health and safety concerns. The Project has the potential to have a positive impact on the history and settlement by maintaining the *status quo* through increased opportunities without directly impacting land within the regional council, though this is anticipated to be low.

Clermont is a community that could potentially experience population expansion if access to the Project site is improved (see Section 20.4.1.2 and Section 20.4.1.11). Since an upgrade of the Alpha-Clermont Road is not anticipated as part of the Project, this possibility has not been explored further. The SIMP and the Hancock Consultative Committee (HCC), which would have already been set up as part of the Alpha Coal Project, will include participation for IRC in order to effectively monitor external changes (like road upgrades) that are indirectly related to the Project, as well as direct Project impacts.

#### 20.4.1.2 Demographic

##### Baseline

The following key points about the demographic of IRC were identified (OESR, 2010a):

- As at 30 June 2009 the estimated population of the IRC Area was 22,417;
- At the time of the 2006 Census, 419 people or 2.1% of the population in IRC stated they were of Aboriginal or Torres Strait Islander origin;
- As at 30 June 2008, 71.1% of the population in IRC were working aged (i.e. 15 – 64); and
- At the time of the 2006 Census, 55.8% of families in IRC were couples with children, while only 8.0% were single-parent families; and
- At the time of the 2006 Census, the population of IRC was expected to grow at an average rate of 2.2% per annum between 2006 and 2026.

### Impacts and Mitigation

The Project in its current form is more likely to have positive impacts associated with population growth than negative impacts on the regional demographic. As discussed in Section 20.4.1.1, there is



currently restricted access to the Project site, which is a limiting factor in people relocating to Clermont for employment opportunities with the Project. The Clermont population is already well established and fairly stable, and currently there is housing available to support minor population growth. Significant population growth (>5.0% - Burdge, 2004) would be measured at ~125 residents for Clermont. This is not anticipated to occur; however, Phase 2 SIMP consultation should identify means for tracking population changes, recognition of sources (the Project, other projects, increased access or cumulative), mitigation options and responsible authorities. It is important to note that manageable population growth is a stated objective of IRC for the Clermont area. The SIMP should also consider defining manageable growth for each region in consultation with local government.

#### **20.4.1.3 Culture and Community Dynamics**

##### **Baseline**

The following key points on the culture and community dynamics of IRC were identified (OESR, 2010a) at the time of the 2006 Census:

- Of those aged 15 and over, 22.6% in IRC were volunteers within the regional; and
- 50.5% of people in IRC were living (usually residing) at a different address five years earlier;
- 7.4% of people in IRC stated that they were born overseas; and
- 5.1% of people in IRC were in the most disadvantaged and 17.3% were in the least disadvantaged quintile.

Clermont is a well integrated community mainly comprising agriculture and mining. There is a well established relationship with Rio Tinto (the owner of both the Blair Athol and Clermont mines) and the community, and mining is a part of the social fabric. The relationship with mining in general is also well established throughout the council, though the relationship is more positive in the Clermont area.

##### **Impacts and Mitigation**

The impacts of the Project on culture and community dynamics are again maintenance of the *status quo*. This is assessed as a low positive impact due to the well established mining component of the community. As discussed previously, the SIMP will include a means for monitoring change in the community associated with culture and community dynamics. Issues in smaller population centres similar to Clermont have occurred elsewhere when multiple mining companies employ residents. Council could prove an important liaison between multiple projects to manage this, and should be consulted regularly in order to maintain a positive and proactive relationship.

#### **20.4.1.4 Housing and Accommodation**

##### **Baseline**

The following key points on the housing and accommodation of the regional (IRC and Clermont) study were identified (OESR, 2010a; ABS, 2006a):

- In the 12 months ending 31 March 2010, there were 95 dwelling units in new residential buildings approved in IRC, representing a total of \$28.463 million; and



- At the time of the 2006 Census there were 1,300 private dwellings in Clermont (state suburb) of which, 1,054 were occupied. Of those occupied 60.8% were occupied by families, while 24.3% were single-person households.

Consultation with IRC indicated there is housing currently available in the community, as well as additional potential housing from Rio Tinto supplies. Council indicated there is difficulty in the process of State release of land for development, which could be a limiting factor in the future.

### **Impacts and Mitigation**

The Project is not anticipated to significantly increase the population in Clermont in its current form, and is therefore assessed as a potential low impact on housing and accommodation. This could change with improved access to the Project site; however, that was not assessed as part of the current Project description. The SIMP will consider options for tracking housing stock in the community and reasons for changes. The Proponent will also consider working with councils to help expedite the process of land release from the State government for development.

There is a potential for market speculation to increase housing prices, but this is assessed as a low likelihood due to anticipated population changes (see Section 20.4.1.2. Hancock has an ~1,500 acre plot of land near Alpha and will explore opportunities with BRC for future beneficial use. This may assist in housing and accommodation issues for the community, and/or a potential commercial/industrial area. The exact use(s) will be determined in consultation with BRC.

#### **20.4.1.5 Health, Wellbeing and Social Infrastructure**

##### **Baseline**

The following key points about health and wellbeing in the regional (IRC and Clermont) study were identified:

- There is an emergency hospital offering various services in Clermont;
- There is a permanent Queensland Ambulance Service (QAS) stationed at Clermont (Pers. Comm. - Des Howard, Rob Bauer and Rob Chandler, 2010);
- At the time of the 2006 Census, 1.3% of persons in IRC were in need of assistance with a profound or severe disability (OESR, 2010a); and
- The average annual increase in births in IRC was 7% between 2001 and 2007.

There are also health and wellbeing services through the regional council and State government available. Clermont has several community organisations and networks including:

- Clermont Community Housing and Other Services;
- Isolation Parent's Support Centre;
- Clermont Country Women's Association; and
- Returned Service League (RSL).

### **Impacts and Mitigation**

It is not expected that the Project will have significant impacts on the Health, Wellbeing and Social Infrastructure of the regional study area. The main reason for this is the distance from the mine to the



area and the high number of operational mines in the regional study area already. Those impacts that were considered were likely to be positive.

Some key potential impacts to consider however are:

- The stresses on employees and their families due to FIFO/DIDO/BIBO arrangements;
- Changes in the incidences of substance abuse (alcohol and drugs);
- Changes in the incidences of crime and deviant behaviour, including domestic violence; and
- Changes in the rates of gambling and other forms of problem gaming.

#### **20.4.1.6 Education and Training**

##### **Baseline**

The following key points on the education and training opportunities of the regional (IRC and Clermont) study area were identified (OESR, 2010a):

- In the 12 months ending 31 December 2008, 96.5% of students attending school in IRC attended a government school and 3.5% attended a non-government school; and
- At this time of the 2006 Census 49.7% of persons aged 15 and over in IRC had post-school qualifications.

The Clermont Kindergarten and Day Care Centre has recently been expanded and extra spaces are currently available. This is the only childcare facility currently available in Clermont (pers. comm., May 2010). However, there is always difficulty in finding spots and appropriate times in child care services for communities in Queensland, particularly for shift workers and their families. Limited services also mean residents have fewer options, and often only one or none.

Clermont has schooling available from Reception to Year 12, and there is also a Central Queensland Institute of Technical and Further Education (TAFE).

##### **Impacts and Mitigation**

The Project is not anticipated to negatively impact on local education and training. There are opportunities for shared training in the community though it is difficult to determine if these opportunities would materialise. Population increases may result in schools reaching critical mass and acquiring additional resources; however, population increase within Clermont at a significant level (>5.0% - Burdge, 2004) is not anticipated to occur.

#### **20.4.1.7 Labour Market and Employment**

##### **Baseline**

The following key points on the labour market and employment opportunities of the regional (IRC and Clermont) study area were identified (OESR, 2010a):

- The smoothed unemployment rate for IRC as at March quarter 2010 was 1.4%; and
- At the time of the 2006 Census, Mining was the largest industry of employment of usual populations in IRC (38.9% of employed labour force).



Clermont unemployment figures were 3.1% for the 2006 census; however, consultation found this number to be closer to 2.0% in 2010. At the time of the 2006 census (most recent available statistics) 19.0% of those employed in Clermont, were employed in the coal mining sector. This is significantly more than the next highest industry, Sheep, Beef, Cattle and Grain industry which accounts for around 9.6% of employment. Other industries providing significant employment are school education (6.1%), supermarket and grocery stores (4.1%) and local government administration (3.5%). These figures show that there is a high level of local mining capacity and skill in Clermont and indicates that unless alternative employment industries are developed, there could be an increase in unemployment when Clermont mine closes in the projected 16 years.

### Impacts and Mitigation

The continuity of mine employment opportunities in the region is a positive impact, particularly since the Project is anticipated to outlive the current mining operations in the Clermont area. This is coupled with increased employment opportunities as a second coal mining project in BRC mine will provide more employment opportunities for exposure to larger scale mining operations to residents of the regional study area, if they should choose to take them up. A potential spin off effect from the increases in opportunities is population growth, which in this case would be a cumulative effect of several mine employment options. As discussed previously, restricted access to the Project site is a limiting factor in population growth directly associated with the Project (see Section 20.4.1.2 and Section 20.4.2.11).

#### 20.4.1.8 Industry and Business

##### Baseline

The following key points on industry and business in the regional (IRC and Clermont) study area were identified (OESR, 2010a):

- The total value of agricultural production in IRC in 2005-06 was \$232.8 million, 2.7% of the total value of agricultural production in Queensland; and
- In 2006-07, there were 1,635 businesses in IRC, 0.4% of all Queensland businesses.

The IRC economy is heavily reliant on mining with the industry accounting for 76.1% of the region's GRP in 2007/08 representing a value of approximately \$5.7 billion. With a number of new mining prospects and extensive exploration and expansion being undertaken throughout the Bowen Basin, this amount is expected to grow (pers. comm., Cedric Marshall, Feb 2010).

### Impacts and Mitigation

The impacts on the Isaac Regional Council are limited due to distance to the Project and access. However, any impacts associated with industry and business are deemed to be positive. The establishment of a light industrial site within the mine lease will enable businesses to establish a satellite operation that can be used to service both this Project and other mine sites proposed for the BRC region. This will potentially provide opportunities for businesses in Clermont and other IRC communities, except these may be limited due to issues regarding access to the Project site.



#### **20.4.1.9 Income and Cost of Living**

##### **Baseline**

The following key points on the income and cost of living of the regional (IRC and Clermont) study were identified (OESR, 2010a):

- At the time of the 2006 Census, there were 4,324 persons aged 15 years and over in IRC who stated their gross individual weekly income was less than \$400 (29.4% of all persons aged 15 and over) and there were 2,014 persons who stated their gross individual weekly income was greater than \$2,000 (13.7% of all persons aged 15 and over).
- At the last census (2006), the median individual weekly income in Clermont was \$490 and the median family income was \$1,391. The median household income was \$1,091. This put Clermont at a higher average earning level than the rest of Queensland, and was largely attributable to mining. Median rental prices in the Clermont area were approximately \$150-\$430 in August 2010 (RealEstate.com.au, August 2010).

##### **Impacts and Mitigation**

The Project has the potential to increase housing and accommodation prices in the area, though this is more likely to result from market speculation. There could also be a slight increase in the cost of living associated with increased mine employment (vendors increase prices). This was assessed as medium, as the Project will provide for more employment in the region and thus further contribute to an increase in medium income across the region. However, this is balanced by the fact that there is already plenty of mine employment opportunity in the Clermont area. The primary mechanism for mitigating this impact is through the Communication and Community Engagement Plan.

There is also a potential for positive impacts associated with the high wages from mine employment. This was assessed as a high positive; however, the potential number of people to experience this is not included in the assessed impact ranking. For context it is important to note that the number of people anticipated to receive higher incomes from the Project is likely to be low, given the other mine employment opportunities currently available in the Clermont area and region as a whole.

#### **20.4.1.10 Governance**

##### **Baseline**

The following key-points on the governance, culture and community dynamics of the regional (IRC and Clermont) study area were identified (OESR, 2010a).

- The IRC covers an area of 58,862 km<sup>2</sup> (3.4% of Queensland's total area); and
- The IRC is made up of a Mayor and eight Councillors (IRC, 2010).

IRC is responsible for establishing the vision, mission, values and the strategic direction for the area. The Council's vision is "to be the region of first choice", the mission is "to promote and enhance the diversity of lifestyles and opportunity" (IRC, 2010).

The Council is still adjusting to the amalgamation process forming the regional council from March 2008. This is a common experience across Queensland, particularly amalgamations of multiple former shires over vast areas. As a result there is not a full integration of programs and services in the Clermont area from other areas of IRC.



### Impacts and Mitigation

There is a potential impact to the community if the Project fails to effectively engage in regional planning processes. This was assessed as negative medium impact. The outcome would be that the regional planning process, which has recently commenced, would not adequately consider potential social impacts on the community as a result of the Project. This would mean that the Whitsunday, Hinterland and Mackay (WHAM) Statutory Plan would not include scope to address these potential impacts, and as such, State and Commonwealth funding and development would be harder to obtain. Conversely, effective engagement in these processes will enable potential impacts to be identified and strategies developed to manage these impacts, for example, the plan may acknowledge the increasing significance of the Alpha–Clermont Road and prioritise the required upgrade for funding. As mitigation, the Project will adopt a range of strategies to be documented in the Communication and Community Engagement Plan to support effective engagement with regional councils (including IRC) throughout the relevant planning processes. The Proponent will have already established the Hancock Consultative Committee, as part of the Alpha Coal Project, which will include consultation and engagement with local councils as an integral part of its mandate.

Further potential impacts were considered to be the potential for the Proponent to not effectively engage local council in its community committee or fail to link in with regional community development or other local government programs and activities. IRC has developed proactive and positive relationships with mining proponents active throughout the region, as a result of these relationships, community development activities have been more targeted and designed to ensure they best address community needs and desires. These potential impacts have both been assessed as low negatives.

#### 20.4.1.11 Primary Infrastructure and Access

##### Baseline

The following key-points on the primary infrastructure and access features of the regional (IRC and Clermont) study area were identified:

- At the time of the 2006 Census, 70.4% of occupied private houses in IRC reported having an internet connection (OESR, 2010a);
- The Peak Downs and Gregory Highways connect Clermont to the rest of IRC and CHRC respectively;
- Clermont is connected to Alpha via the Alpha-Clermont Road;
- Emerald is the cross-road for the Capricorn Highway (east-west) and the Gregory Highway (north); and
- The IRC operates airstrips at Clermont, Dysart and Moranbah (Airports Australia, 2010).

Clermont is fully serviced with basic infrastructure including roads, electricity, water and sewerage.

### Impacts and Mitigation

The state of the Alpha-Clermont Road is a significant limiting factor for Clermont experiencing more (positive and negative) social impacts associated with the Project. The road is not of a standard suitable for Project transportation of both workers and materials. The road is gravel for large tracts, particularly between the Project site and Clermont, and is single lane for most of the length. It is also prone to flooding and adverse driving conditions during and immediately after rain events. An upgrade



of this road is not part of the Project description due to the access available along the Capricorn Highway and then the Alpha-Clermont Road via Alpha. Current Project design does not envisage use of this road but this may change over time. The SIMP will consider including an indicator to monitor use of the Alpha-Clermont Road from the site to Clermont.

There are additional options available which the Proponent may consider. Council has identified the potential for a short haul flight from Clermont to Emerald to enable more workers from Clermont to work at the Project, and drastically reduce travel time. This would likely require a private enterprise charter flight. Other options include councils and the Department of Transport and Main Roads upgrading the Alpha-Clermont Road outside the scope of the Project. The Proponent encourages innovative transportation and logistics opportunities to assist the Project and will consider any viable option.

## **20.4.2 Emerald and Central Highlands Regional Council**

### **20.4.2.1 History and Settlement**

#### **Baseline**

The Central Highlands Regional Council (CHRC) area was created in March 2008 following a recommendation by the Report of the Local Government Reform Commission released in July 2007 (Local Government Reform Commission, 2007). The council covers an area of 59,888 km<sup>2</sup> from Arcadia Valley in the south, to the Peak Ranges in the north and in the east from Boolburra to Bogantunga in the west. The council is predominantly agriculture though mining has been offering increased wealth and employment opportunities in the region since the 1950s.

The coal mining potential of the Central Highlands region was first espoused by Ludwig Leichardt when he noted that coal around Blackwater looked similar to the rich coal seams identified in the Newcastle area when he explored the region in 1845. Coal mining quickly became an important industry in the region around Blackwater. Copper and gold were discovered in several locations throughout the region in the 1880s leading to a brief flurry of mining activity; however, agriculture remained the dominant industry for at least the next century. Over this time, the focus of agriculture has shifted from cattle and sheep grazing to cropping with the establishment of the British Food Industry Corporation in 1948 and the construction of the Fairbairn Dam in 1972.

Emerald is a large, modern country town that was established in 1879 as a base for building the western railway. The town is named after Emerald Downs Hill, a lush emerald-green hill located just north of town. Emerald is now considered the hub for the Central Highlands and the gateway to the Sapphire Gemfields; the largest and one of the richest sapphire fields in the southern hemisphere. The town is located 917 km north-west of Brisbane and about 280 km west of Rockhampton (About Australia, 2010). Plate 20-2 shows a road train typical of the vehicles operating the inland transportation network around Emerald.

The area around Emerald was subject to an extensive clearing program during the 1880s and 1890s and the majority of the area's Indigenous population was shifted closer to the coast.

**Plate 20-2 Typical road train in the region**

Source: HGPL

The construction of the Fairbairn Dam made large scale coal mining a possibility in the region, and from the 1970s mining has become a significant industry in the region. Emerald is the largest town in the southern Bowen Basin and services a number of mines around the area. Since 2000 the mining boom has resulted in significant activity around the Emerald area. There are a large number of FIFO workers in Emerald while young families of coal mining employees are increasingly moving to the region. There is also a strong mining service industry in Emerald. As a result of this activity, Emerald has experienced steady population growth and development.

Emerald experienced a one in 100 year flood in 2008, when heavy rain in the Drummond Range catchment area caused Fairbairn Dam to overflow. More than 1,000 houses were affected and 2,500 residents needed to be evacuated. Emerald flooded again in December 2010 under similar circumstances with 95% of businesses damaged including one of the local supermarket complexes. Once again over 1,000 houses were affected (ABC News, 3 January 2011).

### **Impacts and Mitigation**

The Project is not expected to result in changes to the perception of CHRC or Emerald as both are already viewed as a mix of agriculture and mining. The Project is also located outside of the region; however, the Capricorn Highway will be a major access route to the Project site.

The Project has the potential to have a positive impact on the history and settlement of the area by maintaining the status quo and providing increased opportunities, without directly impacting land allocation within the council. As this will be the second project (after the Alpha Coal Project) to be established in the nearby Galilee Basin (located just to Emerald's west), the Project may provide a critical mass of opportunity for service companies. Because of its location and access, Emerald is perfectly positioned to capitalise on the development of the Galilee Basin and become a larger mining service centre. This impact has been assessed as high, and will be supported by enhancement activities focussed on maximising local business and employment activities.

#### **20.4.2.2 Demographic**

##### **Baseline**

The following key points about the CHRC were identified (OESR, 2010b):

- As at 30 June 2009 the estimated population was 30,403;



- At the time of the 2006 Census, 894 people or 3.4% of the population stated they were of Aboriginal or Torres Strait Islander origin;
- As at 30 June 2008, 70.2% of the population were of working age (i.e. 15 – 64);
- At the time of the 2006 Census, 53.3% of families were couples with children, while 8.9% were one-parent families; and
- At the time of the Census, the population was expected to grow at an average annual rate of 2.1% between 2006 and 2026.

### **Impacts and Mitigation**

In its current form, the Project is more likely to have positive impacts associated with population growth than negative impacts on the regional demographic. As discussed in Section 20.4.2.1 (Impacts and Mitigation) the Capricorn Highway is one of the main access roads to the Project site, which may make Emerald attractive to people wishing to relocate to the area for employment purposes. Emerald is also the location of a number of mine-specialist training providers which may be utilised by the Project, resulting in potential increases to the non-resident population of the town.

The population of Emerald grew by approximately 20.1% between 2004 and 2009. As a result there are significant demands on housing in Emerald. This combined with limited supply has led to high prices which may serve as a limiting factor to potential population growth. Significant population growth (>5.0% - Burdge 2004) would be measured at ~ 865 residents for Emerald. This is not anticipated to occur as a result of the Project; however, Phase 2 of the SIMP will identify means for tracking population changes, recognition of sources (the Project, other projects or cumulative), mitigation options and responsible authorities. It is important to note that managed residential population growth is an objective of the CHRC. In consultation with the councils, the SIMP will also consider defining manageable growth for each regional council.

#### **20.4.2.3 Culture and Community Dynamics**

##### **Baseline**

The following key points about the demography of CHRC were identified (OESR, 2010b):

- At the time of the 2006 Census, 23.2% of those aged 15 and over were volunteers with the regional council;
- At the time of the 2006 Census, 54.3% of people in CHRC were living (usually residing) at a different address five years earlier;
- At the time of the 2006 Census, 8.3% of people living in CHRC stated they were born overseas; and
- At the time of the 2006 Census, 8.5% of the population were in the most disadvantaged quintile of the SEIFA index; while 19.6% of people were in the least disadvantaged quintile.

The community of Emerald appears to be becoming more settled, with a higher proportion of the population having lived in the area for longer at the time of the most recent resident's survey than during previous surveys. Mining is a part of the social fabric and is well established. However, the potential negative impacts of mining were highlighted as a concern for respondents regarding living in the area, particularly for those in rural areas.



## **Impacts and Mitigation**

The project is anticipated to have minimal impacts to the culture and community dynamics of the area. The Proponent will increase the role of mining to the region but this is neither a new phenomenon nor an undesired outcome for many residents and councils. The nature of employment, requiring more personnel with underground mining expertise, will provide employment opportunities for people within the regional study area, particularly around Emerald. The BIBO/FIFO policies will facilitate this. However, the region currently has very low levels of unemployment; therefore, it will be personal choice that drives people to seek employment on the Project. As a result the magnitude of this potential impact is anticipated to be low.

### **20.4.2.4 Housing and Accommodation**

#### **Baseline**

The following key points on the housing and accommodation in CHRC were identified (OESR, 2010b, ABS, 2006b):

- In the 12 months ending 31 March 2010, there were 264 dwelling units in new residential buildings approved in CHRC representing a total value of \$7.041 billion; and
- At the time of the 2006 Census, there were 4,478 private dwellings in Emerald, of which 4,001 were reported to be occupied. Of those occupied 71.7% were family households, while 15.3% were single-person households.

A recent study into housing affordability in CHRC undertaken by the Department of Communities (June 2010) identified key demographic and housing trends for CHRC. The report found that housing prices have increased significantly over recent years, with average weekly rent above the state average. It also found that a lower proportion of houses are fully owned or being purchased, while a higher proportion is rented from their employer, parents or other-unstated. The number and proportion of affordable rental stocks decreased between 2004 and 2009 in almost all categories and in all CHRC statistical local areas. Low income households account for a smaller proportion of households purchasing houses; however, of those that do there is a higher proportion spending more than 40% of their income on housing.

These findings were supported by community consultations in Emerald which indicated that housing prices had increased dramatically, and were prohibitive for people outside of the mining sector.

## **Impacts and Mitigation**

In its current form, the Project is not expected to significantly increase population in Emerald and therefore is assessed as a potential low impact on housing and accommodation (see Section 20.4.2.2) (Impacts and Mitigation). However, this could change if people choose to move closer to the Project site and see Emerald as a good option because of the facilities and services available. Also, there is a large amount of industrial land available in Emerald and CHRC which may attract new mining service businesses to the area resulting in population growth. The SIMP will consider options for tracking housing stock in the community and reasons for changes. The Proponent will also consider working with councils to help expedite the process of land release from the State government for development.



#### 20.4.2.5 Health, Wellbeing and Social Infrastructure

##### Baseline

The following key points were identified about the Health, Wellbeing and Social Infrastructure in CHRC:

- There is an emergency hospital offering a range of services in Emerald. The hospital services the greater CHRC and surrounding areas;
- There are permanent QAS stations in Emerald and Anakie;
- At the time of the 2006 Census 1.9% of people in CHRC were in need of assistance with a profound or severe disability; and
- There was an average annual increase in birth rates of 4.2% between 2001 and 2007.

There are also health and wellbeing services through the regional council and State government available. There are nine dental practices serving the Emerald region and local stakeholder consultations indicated a high degree of satisfaction with these services.

There are a number of regional service providers in Emerald who specialise in providing health care and social services to Indigenous people including; Central Highlands Aboriginal Corporation; Emerald Community and Primary Care; Housing and Homelessness Services; and Emerald Work Readiness Program run by Goldings Contractors and Salvation Army.

Emerald has several community organisations and networks including Anglicare, Lifeline, Central Highlands and Western Queensland Family Support Association, St Vincent de Paul and St Vincent's Community Nursing Services, Royal Queensland Bush Children's Health Scheme, and Salvation Army Employment Plus.

##### Impacts and Mitigation

It is not expected that the Project will have significant impacts on the Health, Wellbeing and Social Infrastructure of the regional study area. The impacts that were considered were ranked as low, the main reason being the distance from the mine to the area and the high number of operational mines in the regional study area already. However, key impacts to consider are:

- Increased pressure on air ambulance and Royal Flying Doctor's Service in response to emergencies at the mine;
- Increased demand on Emerald Hospital in response to injuries, accidents and emergencies at the mine site;
- The stresses on employees and their families due to FIFO/DIDO/BIBO arrangements.

#### 20.4.2.6 Education and Training

##### Baseline

The following key points on education and training opportunities in CHRC were identified (OESR, 2010b):

- In the 12 months ending 31 December 2008, 77.4% of students attending school in CHRC attended a government school and 22.6% attended a non-government school; and



- At the time of the 2006 Census, 46.7% of persons aged 15 and over in CHRC had post-school qualifications.

There are currently 290 children on waiting lists for childcare in Emerald, with availability in day cares for infants and toddlers (0-2 years) a particular problem. The CHRC is working to attract new childcare providers to Emerald to address this shortfall; however, reported providers are having difficulty securing finance and accessing qualified staff.

There are a number of private education providers with a particular focus on the coal mining industry based in Emerald. These include:

- Lennon Training – accredited courses include general mining, coal competencies, scheduling and rescue;
- Capricornia Training – industry focused organisation working with local organisations to help recruit apprentices, trainees and up skill existing staff; and
- Central Highlands Safety Services (CHSS) – focuses on risk management and safety in the resource industry. Based in Rockhampton however provides a number of coal focused courses in Emerald and on-site at mines.

### **Impacts and Mitigation**

The potential impacts to education and training in the regional study areas are low; however, there could be increased demand on child care facilities. Child care is often a difficult issue as there are limited opportunities in all centres across Queensland. This is because of both a general lack of spaces, and also personal preference as to the type of child care service desired.

#### **20.4.2.7 Labour Market and Employment**

##### **Baseline**

The following key points on the labour market and employment opportunities in CHRC have been identified (OESR, 2010b):

- The smoothed unemployment rate for CHRC as at March quarter 2010 was 2.6%; and
- At the time of the 2006 Census, 22.3% of employed usual residents in CHRC were employed in mining, the largest employment industry in the region.

Unemployment rates in Emerald were 1.9% at the time of the 2006 census. Consultation indicated that the unemployment rate continues to be at this low level in 2010. The most recent available statistics, those from the 2006 Census showed that coal mining accounted for 14.5% of all employment in Emerald. This was significantly more than the next highest industry, school education which accounts for around 5.1% of employment. Other significant industries for employment were heavy and civil industry (3.4%), supermarket and grocery stores (3.0%) and food service industry (2.9%).

### **Impacts and Mitigation**

Mining is an integral part of the regional study area's economies, providing significant employment throughout CHRC. The establishment of a second coal mining project in BRC will provide more employment opportunities for exposure to larger scale mining operations to residents of the regional study area, if they should choose to take them up. While these opportunities do not provide for new



skills sets or industry sectors, the Project does represent significant employment opportunities within the mine itself, and also in the provision of services to the mine.

The Project will explore opportunities to provide BIBO services to transfer workers from regional centres to the mine for their shift rotations in an attempt to enhance the potential employment opportunities.

There is potential for workers from other industries to transfer to mining as a result of the Project; however, this has been assessed as low, since there are already a number of mining opportunities around Emerald and the surrounding area. For a town like Emerald, this is probably more perception than reality; however, it could occur and have an impact on other industries. Councils tend to be particularly concerned about loss of staff to the mines, particularly from community liaison type roles. Council has also suggested worker sharing possibilities and apprenticeship possibilities that the Proponent will explore on an ongoing basis with council.

#### **20.4.2.8 Industry and Business**

##### **Baseline**

The following key points on industry and business in CHRC were identified (OESR, 2010b):

- The total value of agricultural production in CHRC during 2005-06 was \$449.6 million, representing 5.2% of all agricultural production in Queensland; and
- In 2006-07 there were 2,991 businesses in CHRC, 0.7% of all Queensland businesses.

Mining is a significant industry in CHRC contributing approximately \$2.6 billion to the region's GRP in 2008-09 (59.2% of total GRP of the region). This was a 27.3% increase on the previous year, demonstrating that mining in the Bowen Basin continues to grow.

The CHDC runs a program called Hi-Net which links small businesses together to enhance their capacity so that they are eligible to tender for and win mining contracts. The program was originally established by the Emerald Chamber of Commerce, with support from mining proponents located throughout the area. As well as establishing the linkages between businesses, Hi-Net also provides training and assistance to help businesses understand and comply with the contractual requirements of mining companies.

##### **Impacts and Mitigation**

The impacts on the regional area are limited due to distances to the Project, yet any impacts would be positive. In Emerald, there is significant potential for independent contractors and service providers to establish businesses or expand current businesses to service the Galilee Basin. The establishment of a light industrial site within the mine lease will enable businesses to establish a satellite operation that can be used to service both this Project and other mine sites proposed for the BRC region. The CHRC indicated there were plans for a new industrial precinct to the north west of Emerald along the proposed bypass that may also serve as a prime area from which to base a mine service business. The Proponent will explore opportunities with CHRC to promote this area and others as potential industrial development to support mines in the Galilee Basin.



#### 20.4.2.9 Income and Cost of Living

##### Baseline

The following key points on income and cost of living in CHRC were identified (OESR, 2010b):

- At the time of the 2006 Census, there were 6,152 people in CHRC who stated that their gross weekly individual income was lower than \$400 (31.1% of all persons aged 15 and over). There were 1,885 persons who stated their gross weekly individual income was greater than \$2,000.
- At the time of the last Census (2006), the median individual income gross weekly income in Emerald was \$689 and the median family income was \$1,796. The median household weekly income was \$1672. These income levels were significantly higher than those across Queensland as a whole, which is largely attributable to mining in the area. Median rental prices in Emerald were approximately \$320 - \$550 (Realestate.com.au, 2010).

##### Impacts and Mitigation

The establishment of this Project has the potential to place upward pressure on the cost of living in the regional study area. The Project will provide another opportunity for employment for residents of CHRC. While there is already a very low level of unemployment in CHRC, additional projects will provide for more employment opportunities and contribute to a further increase in the median income across the region. Also, as the population and income levels in Barcaldine Regional Council is expected to increase with establishment of the Project, a certain degree of leakage to the CHRC area can be expected, and this has the potential to contribute further to an increase in the cost of living in the CHRC area.

It is likely that some mining service businesses will expand to provide services to this Project and other mines under consideration within the Alpha area. This potential growth will result in more jobs being available and will probably contribute to some level of population growth, leading to additional pressure on already stretched housing stocks. Further, it is likely that at least some of the training requirements of the Project will be filled by service providers in Emerald, and as such there may be a need for short-term accommodation for personnel in Emerald. Again this will place further pressure on already limited stocks. The primary mechanism for mitigating both these impacts is through the Communication and Community Engagement Plan, and will be explored in Phase 2 of the SIMP.

There is also the potential for positive impacts from the high wages associated with mining. This was assessed as a high positive. It is important to note that the potential number of people to experience this is not expected to be significant given the other mine opportunities in the area and region as a whole.

#### 20.4.2.10 Governance

##### Baseline

The following key points about governance in CHRC were identified:

- CHRC covers an area of 59,888 km<sup>2</sup> (3.5% of the total area of Queensland); and
- CHRC is made up of a Mayor, a Deputy Mayor and seven Councillors.

CHRC has recently amended the CHRC 2009-2013 Corporate Plan. The draft plan documents CHRC's vision as shaping the future by "valuing people, partnerships and place". Its mission is to "be



a region working in partnership to foster sustainable development and vibrant communities" (CHRC, 2010). CHRC is still adjusting to the March 2008 amalgamation process to form a regional council. This is a common challenge across Queensland, particularly where the amalgamation has involved multiple form shire councils over vast areas.

CHRC has extensive experience in managing the impacts of mining and have developed programs and partnerships to best maximise potential benefits while minimising negative impacts through mitigation.

CHRC is a part of the Central Queensland Regional Planning area. The area does not currently have a statutory plan guiding regional development. The development of such a plan is an opportunity for a more strategic long-term approach to be taken to managing the development of the region.

### **Impacts and Mitigation**

There is a potential impact to the community if the Project fails to effectively engage in regional planning processes. This was assessed as negative medium impact. The outcome would be that the regional planning process, which has recently commenced, does not adequately consider potential social impacts on the community as a result of the Project. With the development of the plan, there is an opportunity for the Project to be involved. This could help ensure potential impacts are considered and infrastructure or development requirements are provided for. The Project will continue to explore opportunities with council to align planning where possible.

Further negative impacts were considered to be likely to occur if the Proponent fails to effectively engage local council in other planning and program activities. These were assessed as low negatives. CHRC has extensive experience with mining in the region. They also run and coordinate a number of community development programs. Through engagement with the council the Proponent will be able to provide targeted support and engage more effectively with these programs to ensure targeted and appropriate outcomes for the community.

#### **20.4.2.11 Primary Infrastructure and Access**

##### **Baseline**

The following key points were identified about primary infrastructure and access in CHRC:

- The CHRC operates a regional airport in Emerald with regular commercial services. The council also operates airstrips in Capella, Dingo, Duaringa, Rolleston and Springsure (CHRC, 2010); and
- The Gregory Highway connects Emerald with Clermont and the towns in the southern Central Highlands. The Capricorn Highway connects Emerald and Alpha.

At the time of the 2006 Census, 64.7% of private houses in Emerald reported having an internet connection.

The Emerald airport is the largest airport in the region. It has approximately 27 scheduled flights per week and services the surrounding area. Emerald airport is currently undergoing a \$7.7 million upgrade which is scheduled for completion in September 2010,

Emerald has almost reached capacity in terms of new electricity connections for residential and business development. Ergon Energy purchased a piece of land for the development of a new substation; however, CHRC is unsure of when development will commence at this site.



## Impacts and Mitigation

There will be a requirement to transport flammable and dangerous chemicals, explosives and other materials to the mine site for use in the construction and operation of the mine. As in the case of transporting of any dangerous goods there is a risk that there may be a spill, fire or explosion that can cause safety hazards for the surrounding communities. While it is considered unlikely that such an accident will occur, the resultant magnitude will be high on the affected persons and community. As such, this potential impact has been ranked as high. Stringent policies and procedures governing the transportation, storage and use of dangerous materials, flammable chemicals and explosives will be adopted to mitigate the potential for an accident. In addition a comprehensive emergency response plan will be developed in consultation with police and other emergency services to minimise the impact in the event of an accident and ensure a coordinated response.

The Capricorn Highway between Emerald and Alpha is likely to be the main access route to the Project site. The highway is in relatively good condition, with speed limits of 100 km per hour along most of this section. The highway is heavily used by freight vehicles and tourist traffic. The additional usage required for the Project, particularly during construction phase when it is likely that oversized and large loads will be transported to site, may result in additional funding being allocated to support an upgrade to the road so that there are overtaking lanes in this section. The State government has committed to maintenance and upgrade of the Capricorn Highway.

The increased traffic through Emerald that may result from the Project has the potential to generate additional state funding to support the proposed Western Link Road. The Western Link Road which will run through the industrial estate to the west of Emerald would connect the Capricorn and Gregory Highways, diverting heavy vehicles away from the town. Funding is yet to be obtained for this development.

## 20.5 Local Study Area

The overview of the local study area presents key baseline data, potential impacts and mitigation for Alpha and the Barcaldine Regional Council (BRC) area.

### 20.5.1 Alpha and Barcaldine Regional Council

#### 20.5.1.1 History and Settlement

##### Baseline

Barcaldine Regional Council (BRC) came into existence in March 2008 through the amalgamation of the former shires of Aramac, Barcaldine and Jericho following a report from the Local Government Reform Commission released in July 2007. BRC is located in the central west region of Queensland, and covers an area of approximately 53,677 km<sup>2</sup>, 3.1% of the local state area (OESR, 2010c). Plate 20-3 shows Barcaldine area residents at the Barcaldine Show in 2010 at the Project information display.

**Plate 20-3 Barcaldine Show attendees at the Project information display**



Source: HGPL

BRC is made up of small rural centres and a number of agricultural properties. The area was originally settled by pastoralists, and then the railway push west during the 1880s. The main communities are Barcaldine (town), Alpha, Jericho, Aramac, and Muttaborra. Agriculture is the main industry, and consultations indicated that while there is some sheep grazing in the western parts, the area around Alpha is largely cattle grazing country. As such, the area is susceptible to market fluctuations and environmental conditions and there is little room for value adding to build the economy.

Alpha is a small community on the Capricorn Highway, approximately 450 km west of Rockhampton and 250 km east of Longreach. Clermont is located 184 km to the north and Tambo 134 km to the south along a gravel road. The local study area came under colonial settlement in the mid 19<sup>th</sup> century with the push of the railway line west from Emerald and through the Drummond ranges. The town is located to the south of the Belyando River. In addition to the railway station, Alpha was also a coach stop for the service to Tambo. Following settlement there were a number years of good rains, and there was an underground water supply.

The town grew steadily and in the 1950s and 1960s good wool and beef prices brought sustained prosperity to the region. Rural depression during the 1970s however resulted in a downturn and saw closure of some services, including the lay-staffed Catholic school. During the late 1990s and early 2000s there was a sustained period of drought and falling margins making farming in the area harder.

Barcaldine, the largest town in BRC, took its name from a nearby station, Barcaldine Downs. The town is located at the junction between the Capricorn and Matilda Highways approximately 520 km to the west of Rockhampton. Barcaldine is the administrative centre for the BRC and is the location of most services in the council area. Barcaldine is best known as the meeting place for the Great Shearer's Strike of 1891. The strike was widespread across the country; however, Barcaldine was the location for meetings of the leaders, and the Tree of Knowledge in town became a memorial to this struggle. The outcome of the strike was the formation of the Australian Labor Party (ALP).



## Impacts and Mitigation

The local study area and Alpha in particular have been associated with cattle grazing since settlement; however, with the development of the Project, the perception and profile will change to include mining.

As the Project is reliant on the Alpha Coal Project proceeding, and will therefore be the second mine to establish and commence operations in the Alpha vicinity, it is anticipated that the shift in perception from agriculture to mining will have already largely taken place. As such, the magnitude of the impact was considered to be lower, and is thus ranked as medium. The impact is expected to be at its highest magnitude during construction of the Alpha Coal Project, after which people will become increasingly accustomed to and accepting of the diversification. There are a number of towns throughout the Bowen Basin which provide an example for Alpha and the region, whereby they were primarily focused on agriculture, but grew to include mining as an important element. The history of these towns is now based around a strong agricultural sector which remains vibrant, and a very important mining industry providing additional wealth and income to the area. Over time, it has been assessed that this shift will actually become a positive for the community, because of the economic diversity it provides and the vitality it can potentially bring to the community. Communication which promotes the benefits of this shift will be an effective tool for managing this process.

It is inevitable that some people who have lived on their properties which lie within the mining lease for generations will have to move as a result of the Project. This is considered to be a very high negative for those people involved. Given that there are a limited number, however, the impact will not be widespread. Communication and ongoing support to these people will help to mitigate this impact. On the other hand, the potential for the sale of property to a mining company may greatly assist some landholders' ability to achieve a secure economic future, and may mean that some landholders are able to plan their retirement.

There is a possibility of people moving to Alpha from other parts of BRC for employment generated by the Project. While there appears to be some resistance to new people moving to the area to seek employment, it is anticipated that this in-migration will be viewed as positive over the longer term. This is especially because of the increased likelihood that those from within BRC will be a part of the Alpha community's extended social networks and share the same rural values. Additional population within the town, provided it is managed effectively, is a positive for the community as it will help to reverse the current trend of population decline, and turn what many residents consider to be a community that is struggling into one that is striving. Additional population will likely result in at least a stabilisation of services, and at best, will provide additional leverage for achieving increased service provision. Enhancement actions will include Proponent support to BRC in their efforts to secure additional service provision, local employment and procurement policies and an induction program for new mine employee residents.

The mining lease will establish a no-go zone which will lead to increased distances between properties. This will be compounded as the mine lease area lies immediately adjacent to the Alpha Coal Project mining lease, making the distances between properties located to the North of the Project or the South of the Alpha Coal Project even further and access more limited. These factors will potentially cause a breakdown in social networks, particularly for the local residents living on the periphery of the mine. This has been assessed as a high negative impact for this discrete group of people. Conversely the relative isolation and frequent need to travel substantial distances may negate the impact of increased distances between the properties. The Communication and Community Engagement Plan should be used to mitigate and manage this impact.



The potential for people to move to BRC from other areas of Queensland was also assessed as low negative. The reason for this is that given the relative isolation of the area and the limited services available will likely limit the number of people moving there. Those who do move to BRC will be actively seeking a rural lifestyle and will adapt to the community.

Community perception of the negative impacts of mining on health and the environment may make selling properties more difficult and decrease the land value in the region. This has been assessed as a low negative; however, as there is already a limited market for rural property sale due to the urbanisation trend across Australia.

### **20.5.1.2 Demographic**

#### **Baseline**

The following key points on the demography of BRC were identified (OESR, 2010c):

- As at 30 June 2009, the estimated residential population of BRC was 3,376 people, 0.1% of the total population of Queensland;
- At the time of the 2006 Census, there were 194 persons in BRC who stated they were of Aboriginal or Torres Strait Islander origin. This represented 5.9% of the total population;
- At the time of the 2006 Census, in BRC 36.8% of persons were living (usually residing) at a different address five years earlier; and
- At the time of the 2006 Census, there were 4.6% of persons who stated they were born overseas.

Since 2004, BRC has experienced negative population growth of approximately 0.4% per annum, peaking at 0.9% in 2008-09. The main reason for this was the extended period of drought, the decreasing margins in cattle grazing and the limited opportunities for career employment in the region.

The estimated population of Alpha town as at 30 June 2009 was 416, while the population of Alpha State Suburb, which includes landholders in the surrounding region was at the time of the 2006 Census 610.

#### **Impacts and Mitigation**

The Project has a large scale underground mine component which will require personnel with specialist skills and experience. Given the current lack of mining skills within the BRC population, it is reasonable to assume that there will be limited numbers of local residents qualified for employment on this Project. This, combined with the likely drain on the existing potential pool of workers as a result of the Alpha Coal Project, will mean that it is likely the vast majority of the workforce will need to be sourced from outside the area.

With respect to the local area however, a 5% change in population is considered to be significant from a population perspective (Burdge, 2004). A change of this scale in Alpha town equates to ~21 people. It was identified during the consultation process that it is common for a proportion of people seeking employment in mining areas to wish to relocate and live in the area where they work. This has been a common experience in both IRC and CHRC, demonstrated by the population growth over recent years. It is therefore reasonable to assume that some of the workforce will choose to relocate to Alpha or nearby areas. There are also a number of young people who have left the area to seek employment opportunities in the mines of the Bowen Basin and beyond, many of whom may return to the region if there were equivalent employment opportunities.



For the purpose of this assessment, it has been assumed that HACP will result in a 5% population increase in Alpha (21 people), bringing the base population at the commencement of the Project to 432 people. It has also been assumed that the Alpha Coal Project mitigation strategies and actions have been successful in removing some of the factors that currently limit population growth in Alpha such as poor electricity and water supplies as well as the lack of a sewerage system.

Given these factors, it is considered likely that at least a further 5% population growth will occur in Alpha as a result of the Project. The impact of a change in population above 5% was assessed as very high negative, because of the pressures it will place on existing services such as health and education, as well as on infrastructure such as water and electricity supply.

There is the potential that the population increase will result in a percentage increase in the population who are of working age, and male. This can be perceived by the community as potentially resulting in increases in crime and violence. However, this potential impact was assessed as a low negative because this group already represents a higher proportion of the population in BRC. An increase in this demographic would be an amplification of a current trend rather than a new trend for the region.

Population increase is required to ensure Alpha maintains existing service levels and remains a stable community. Provided sufficient services and infrastructure can be developed, population growth has the potential to be a medium positive impact for Alpha.

As discussed previously, the Phase 2 SIMP consultation will identify means to monitor population change and develop mitigation responses and authorities responsible based on the trends identified. The SIMP will also define manageable for each population centre in consultation with local government.

### 20.5.1.3 Culture and Community Dynamics

#### Baseline

The following key points on the culture, and community dynamics of BRC were identified (OESR, 2010c):

- At the time of the 2006 Census, 32.7% of the population aged 15 years and over were volunteers with the BRC;
- At the time of the 2006 Census, 36.8% of the BRC population lived (usually resided) at a different address five years earlier;
- At the time of the 2006 Census, 4.6% of people in BRC stated that they were born overseas; and
- At the time of the 2006 Census, 45.7% of people in BRC were in the most disadvantaged quintile while 6.5% of people in were in the least disadvantaged quintile (i.e. most advantaged).

The culture of BRC is largely rural, with a strong sense of family values. Alpha is a highly cohesive, tight-knit community with residents highlighting everyone knowing one another and the rural values of the area among the things they most like about living there. Many residents are concerned that mining coming to the community will change this dynamic and result in decreased security and safety.



### Impacts and Mitigation

The Project in its current form is likely to change community dynamics and alter the *status quo* by increasing wealth disparity and potentially breaking down community cohesion. This was assessed as a medium negative. The Alpha Coal Project is expected to have already commenced, so these changes were deemed likely to have already started to occur. Conversely, the potential for additional incomes will represent an opportunity for some people in the community to change their lifestyle, increasing the amount of their salary (in amount and proportion) they spend on entertainment and recreational activities. This has been assessed as a medium positive impact. The Proponent will explore opportunities for providing financial planning and counselling services to employees, contractors and the broader community to reduce the potential negative impacts and enhance the positive benefits associated with increases in wages. In addition, the Hancock Consultative Committee will monitor and track changes in the community associated with wealth.

The potential that new people moving to the area may result in a decrease in the sense of security in region was assessed as a low negative. There is also the potential that over time new arrivals to Alpha and district may upset the balance of power within the community. As it is anticipated there will already be some new residents who have moved to the area to work on the Alpha Coal Project, the likelihood of a shift in the power balance as a result of the Project is possible. The magnitude of this however remains at moderate resulting in a medium impact ranking.

A potential change in the community from agriculture to mining and alteration to existing social networks are also possible impacts of the Project. These were assessed as low negatives because while mining may add some alternative options to the community, the majority of people are expected to still be engaged in agriculture, and rural life will remain an integral element of community life.

There have been problems in small population centres like Alpha as a result of the presence of multiple mining companies. This is something that should be managed through coordination, and by drawing upon lessons learned from similar communities in the Bowen Basin. As discussed previously, the SIMP will include a means to monitor changes in culture and community dynamics in Alpha and across BRC. Also the Project Communication and Community Engagement Plan will identify means of supporting integration of new residents into the community including activities such as the welcome to community induction program.

There is potential for local capacity building through the provision of courses such as First Aid and emergency response to mine personnel. Because of the existing limitations on capacity in Alpha, this has been assessed as a high positive.

Phase 2 of the SIMP will include consultation to determine the detail of appropriate strategies to enhance the potential benefits of the Project on the community. These strategies may include providing courses in Alpha town and opening them to the community, as well as providing financial management services and information to personnel and the community.

#### 20.5.1.4 Housing and Accommodation

##### Baseline

The following key points on the housing and accommodation were identified for the Barcaldine Regional Council area (OESR, 2010c; ABS, 2006c):



- In the 12 months ending 31 March 2010, there were nine dwelling units in new residential buildings approved in Barcaldine Regional Council, which represented a total of \$2.5 million;
- At the time of the 2006 Census, there were 300 private dwellings in Alpha, of which 235 were reported to be occupied. Of those, 60.4% were occupied by families while 28.9% were lone-person households; and
- At the time of the 2006 Census, there were 858 private dwellings in Barcaldine, of which 711 were reported to be occupied. Of those, 58.4% were occupied by families, while 23.1% were lone-person households.

There has been a substantial increase in the price of land and housing in Alpha over recent years, although in recent months, this has stabilised. This is largely based around speculation over possible mining development in the region and is fuelled predominantly by investors from outside of the local region.

There are limited land plots available for development in Alpha. BRC auctioned 10 blocks in May 2010 for an average price of \$111,000 plus GST each, and there are an additional 20 blocks which are to be auctioned shortly. Apart from a few private blocks, these are the only blocks available for development in Alpha at present. There is no other residential zoned land available, though BRC has indicated they are exploring with State government an opportunity for the release of up to 200 more lots. Further limitations to housing development are insufficient electricity supply, limited water availability and a lack of an integrated community sewerage system. The high level of demand for housing construction services currently evident throughout Queensland, Australia and PNG has the potential to stand as a further factor restricting development of housing in Alpha.

### **Impacts and Mitigation**

Any population growth associated with the Project will result in increased demand for housing in Alpha. Because of limited supply this will push up the prices for both purchasing and renting houses. There is already evidence of this occurring, based purely on speculation. While increased house prices are beneficial for landowners or investors, this benefit can only be realised if the property is sold and another is purchased at a lower price. This has been assessed as very high negative. Experiences in other similar towns in the Bowen Basin, where housing shortages are critical, have resulted in substantial increases in rents and housing prices, with rents in some cases now more than double that of the state median. There will be a similar increase in demand for short-term accommodation which is also in limited supply in Alpha. This has been assessed as a low negative.

The potential for demand to outstrip supply and for street amenability to fall as tenants allow properties to become run down were assessed as potential low negatives.

There is also potential for these negative impacts to be reversed into positives. As it is currently designed, the Project will result in increased demand for short term accommodation because of consultants and contractors servicing the Project and requiring accommodation. There is also the potential that there will be a positive impact as this increased demand leads to an increased supply of houses as investors capitalise. This increased activity in the housing domain will result in more opportunities for investment in housing, accommodation and service providers. These impacts have been assessed as low positive impacts, as it is likely that these opportunities would have already been taken advantage of as a result of the Alpha Coal Project.



The SIMP will consider options for tracking population trends and housing stocks in the community. The Proponent will also consider working with councils to help expedite the process of land release from the State government for development.

#### **20.5.1.5 Health, Wellbeing and Social Infrastructure**

##### **Baseline**

The following key points about Health, Wellbeing and Social Infrastructure were identified for the BRC:

- At the time of the 2006 Census, 2.9% of the population were in need of assistance with a profound or severe disability (OESR, 2010c);
- There are emergency hospitals in Alpha and Barcaldine;
- There is no permanent doctor located in Alpha; and
- There is no Queensland Ambulance Service (QAS) station in Alpha, the area is serviced by a hospital ambulance attended by a volunteer driver and nurse. There is a QAS stationed in Barcaldine.

The lack of a permanent doctor and QAS ambulance service in Alpha were listed as two of the things residents disliked most about living in the area. While there is a hospital, patients can only be admitted when there is a doctor on duty.

There are other health care facilities in Alpha including Home and Community Care (HACC), Royal Flying Doctor Service (RFDS) coverage, a visiting doctor, a hospital and now also a private pharmacy and a Patient Transport Service that provides subsidized transport to other centres for patients.

There are two organisations in the BRC area dedicated to providing health and community support services to Aboriginal and Torres Strait Island people, both are located in Barcaldine - Aboriginal and Islander Health Team and Central West Aboriginal Corporation.

For a community of its size, there are a number of sports and recreation activities available in Alpha. There are also a number of community services and organisations, the majority of which are volunteer run, including Meals on Wheels, the Alpha Queensland Country Women's Association, and Barcaldine Family and Returned Service League Barcaldine.

##### **Impacts and Mitigation**

Negotiation and uncertainty stresses are ranked as medium impacts as a result of the Project. They are actually a direct impact of the Project location; however, the assessment focuses on the subsequent stress resulting from uncertainty and negotiation about EIS process, as well as the process of land compensation and relocation within the mining lease itself. These stresses can affect the health and wellbeing of the community, subsequently impacting the social infrastructure. This stress will be felt primarily by landholders because of the immediate impact on their living situation; however, the stress will also less commonly affect the broader community. The Proponent will undertake ongoing communication and provide continued support to landholders throughout the resettlement process.

The Project will result in increased traffic which brings with it a greater potential for accidents. This, as well as the potential for accidents as a result of driver fatigue has been assessed as a very high negative. The reason for this is that although the likelihood of their being an accident is low, the



magnitude of the potential impact is very high for those involved and their families. The SIMP will identify any existing programs which will reduce the potential for more accidents to result from the Project, including drawing on lessons learned from the Bowen Basin where accidents are considered one of the biggest impacts of mining where applicable. The Proponent will engage actively with police to support traffic management and consideration will be given to adopting a maximum work day of 12-14 hours which includes travel to reduce the potential for fatigue. The Proponent will also provide BIBO services to bring personnel from regional areas to the Project site, to minimise driver fatigue and the Project's impact on increased traffic.

As it currently stands the Project has the potential to increase demand on Alpha Hospital as well as other local services and facilities. The potential impact on the hospital has been assessed as very high, while it is considered high on other facilities. The potential for increased demand on other emergency services in Alpha including Police was also assessed as a high negative. The Proponent will proactively engage with local emergency services and will establish an on-site medical clinic to minimise the impact of the Project directly on hospital demand. Consideration will also be given to provide counselling and other services to personnel and the community. Conversely, population growth as a result of the Project has the potential to result in increased availability of services in Alpha. As a result of the service stabilisation and possible enhancement that is expected as a result of Alpha Coal Project, these impacts across the range of services and facilities are ranked as medium positive impacts on the community.

A related identified issue relates to the increased use of social infrastructure, putting further pressure on existing needs for infrastructure upgrades and maintenance work. This impact has been ranked as a medium negative. Key elements to mitigate this include supporting BRC in efforts to generate more funding for services from State and Commonwealth government, and ongoing consultation with and support to local service providers. The Proponent will also continue to support/sponsor community development programs in the Alpha area, as well as coordinate efforts for identifying areas for sharing of service opportunities.

Population growth and community-based training may also result in enhanced capacity within the community to respond to emergencies. As discussed in Section 20.5.1.2 the SIMP will identify means to monitor population growth as a result of the Project and will document strategies based on identified trends. The SIMP will also identify means of monitoring demand on emergency services in Alpha and develop strategies to address emerging trends and identify additional resources when required.

Coal mine generated dust is commonly perceived as having negative impacts on community health. This appears to be largely a perception issue as there is little consensus within the literature in regards to the impact of dust on community health and evidence that has been provided is generally anecdotal. The impact has therefore been assessed as a low negative. Community consultations also identified concerns about road dust as a result of increased traffic as a concern. This was also assessed as a low negative. The Proponent will distribute key findings from the EIS about the potential for dust to reach the community. Other related negative impacts were increased air pollutants that could affect localised ambient air quality and noise level increases due to continuous mine operations and traffic. Both these potential impacts were assessed as low negatives.

New people moving to the community can have the potential to impact on residents' sense of security and safety, which may lead to increased stress and anxiety. This was assessed as a medium negative, given the establishment of the Alpha Coal Project will have already resulted in in-migration



to Alpha, changing the dynamics of the community. It is anticipated that once new residents have assimilated into the community, the perceived risks associated with new residents will be eliminated.

The Project Communications and Community Engagement Plan will ensure proactive engagement with the local police and the community to manage stakeholder expectations in relation to these impacts. The Proponent will also provide new workers with an induction, outlining community values and expectations. .

There is a belief that there are higher rates of social deviance and problems in mining communities. It is possible that higher wages (and therefore greater disposable incomes) combined with free time during days off, has the potential to result in increases in social problems and deviance (e.g. drug and alcohol use, gambling). However, again there is no consensus within the research literature to definitive support the link between these problems occurring at higher rates in mining communities than among the general population. This suggests that this more a perception than a reality; this impact has therefore been ranked as a low positive. Nevertheless, the SIMP will identify any existing programs across the region and explore opportunities to expand these programs into BRC and Alpha.

Higher wages associated with the mining industry are a benefit of the Project. However, if they are used in an unsustainable manner can actually result in negative outcomes, particularly if there is an economic downturn and a reduction in employment levels. The Proponent will consider providing financial planning services to personnel and the community to help maximise the benefits associated with higher wages.

Like many other rural communities, Alpha is heavily reliant on volunteers for sports and recreation activities. Population increase may provide a larger pool of potential volunteers, improving and extending current activities and options, resulting in greater choice for the community. The Proponent will encourage personnel to undertake volunteering in the community and will sponsor local sporting and community groups to maximise and enhance these benefits, while the SIMP will monitor the availability of recreation and sporting activities, community participation levels and volunteer participation rates.

#### **20.5.1.6 Education and Training**

##### **Baseline**

The following key points on the education and training opportunities of BRC were identified (OESR, 2010c):

- In the 12 months ending 31 December 2008, 94.8% of students attending a school in BRC attended a government school and 5.2% attended a non-government school; and
- At the time of the 2006 Census, in BRC, there were 38.0% of persons aged 15 years and over with a post-school qualification.

Without additional qualified child care workers, child care facilities are at capacity in Alpha. Education facilities in BRC are limited. There is a P - Year 10 State School in Alpha. The school also provides grade 11 and 12 courses through distance or virtual education programs. Otherwise students need to travel to Barcaldine for Year 11 and 12. Many students leave the area at this age to obtain an education at either boarding school, or move with their families to regional centres.



### Impacts and Mitigation

While the child care facilities in Alpha have only limited scope for expansion from current levels (provided competent staff can be identified and recruited), it is likely that population increases from the Alpha Coal Project will have already used this additional scope. As such, further population growth as a result of the Kevin's Corner Project will place additional pressure on child care services, and require a more comprehensive strategy to address any shortfalls. This impact has been assessed as very high negative. The SIMP will identify ways of monitoring population growth and provide strategies for ensuring effective service responses to this growth. Based on this approach, the Proponent will investigate ways that it can support improved facilities such as supporting BRC in obtaining additional funding or attracting new providers to the region. Consideration may also be given to sponsoring the child care centre to support them to train potential child-care workers or improve facilities. The Proponent will also consider developing a program to promote potential employment opportunities for mine personnel's spouses, particularly in areas of high demand such as childcare.

The mine operations could lead to valuable capacity building opportunities for the community, especially in the area of emergency preparedness and response. As discussed in Section 20.5.1.3 there is the potential for additional training opportunities to be delivered to the community as a result of the Project. As the Alpha Coal Project will be established and operational, it is anticipated that this benefit will have been largely experienced before the Project commences; therefore, this has been assessed as having a medium positive impact.

Population growth is also likely to have a positive impact on school education by increasing demand at both an elementary and secondary level. Assessing the extent of this, however, will depend upon current capacity levels and the ability of the school to meet this increased demand. The Proponent will undertake further investigations into the capacity of Alpha and Barcaldine schools and this will be documented in the SIMP. The SIMP will monitor population trends as well as identify strategies and responsibility for the management of increased demand in the local education system. At the same time, the Proponent will consult with local service providers and support BRC efforts to obtain more funding.

#### 20.5.1.7 Labour Market and Employment

##### Baseline

The following key points on the labour market and employment opportunities of BRC were identified (OESR, 2010c):

- The smoothed unemployment rate for BRC as at March quarter 2010 was 2.8%; and
- At the time of the 2006 Census, Agriculture, Forestry and Fishing was the largest industry of employment for BRC usual residents, with 33.5% of the region's employed labour force.

At the time of the 2006 Census, unemployment in Alpha was 3.4%, higher than the BRC level of 2.8%. At this time, sheep, cattle and beef grazing was the largest industry of employment in Alpha employing 41.2% of all employed people. Other significant industries of employment were government administration (10.4%), hospitals (6.71%) and school education (5.2%). Mining employment accounted for less than 1% of all employment in the region (OESR, 2010c).

The BRC has reported difficulties in retaining staff due to the lure of jobs in the Bowen Basin and elsewhere (pers. comm. Barcaldine Regional Council, May 2010).



### Impacts and Mitigation

There is the potential for workers from other industries to transfer to mining as a result of the Project. This has been assessed as high because of the limited career opportunities available in BRC. It is anticipated however that the majority of people who will choose to leave their current jobs for employment in the mine will do so when the initial project (i.e. the Alpha Coal Project) is established, meaning that a second project will have less of an impact than did the first. A limiting factor against this may be the working conditions in the mines. In particular the shift work and long hours may not align with the rural lifestyle that residents may seek. Councils tend to be particularly concerned about losing their personnel because of this. Even if this shift does not eventuate, there can be a community perception that it is or will happen. The SIMP will document ways of monitoring the number of workers moving from other industries into the mining sector.

Employment opportunities as a result of the Project may lead to there being a decrease in labourers available for agriculture. While unemployment levels are low in BRC, it is possible that there is an underlying level of underemployment with people employed on a part-time or seasonal basis as labourers. Accepting full-time work on the Project may mean these people are no longer available to work on the farms; however, this was assessed as a medium impact because they may continue to take on this work because of the shift-work nature of mining and the extended periods they have off. Population growth may result in a larger pool of labourers available effectively negating this. The Proponent will consider profiling labourers to determine if they align with the mine demographic and the SIMP will identify monitoring tools to determine if there is a decrease in labour available.

At the local scale, increased employment opportunities and greater employment diversity and choice as a result of the Project were assessed as being low positive potential impacts. This is because of the opportunities that are likely to already be available as a result of the Alpha Coal Project. New people moving to the area for employment are likely to bring spouses or family with them. There is potential that these spouses will have skills in high demand in the community and be able to fill identified gaps. These positive impacts have been assessed as high. The Proponent will develop local employment and procurement strategies and will consider developing a spousal employment program to promote opportunities. The SIMP will identify ways of monitoring local employment trends.

#### 20.5.1.8 Industry and Business

##### Baseline

The following key points on industry and business in BRC were identified (OESR, 2010c):

- The total value of agricultural production in BRC in 2005–06 was \$109.6 million, 1.3% of the total value of agricultural production in Queensland; and
- In 2006–07, there were 567 businesses in BRC, 0.1% of all Queensland businesses.

Tourism is an emerging industry in BRC and is considered as an excellent opportunity for economic diversification by residents in the region. A focus of the community is on developing tourist attractions to help develop this industry.

Coal and coal seam gas development offers considerable potential for sustainable employment. The Hancock, AMCI, Vale and Waratah Coal mines have development potential within the district. There are opportunities in direct employment with the mines as well as through contractors providing



services to these coal mines. However, residents are also concerned about the potential social and environmental impacts of mining.

### Impacts and Mitigation

During construction there will be a large amount of equipment that requires transportation to the Project site. This transport may interfere with the transportation of community and agricultural goods, particularly if roads are closed to allow oversized loads to pass. This has been assessed as a potentially very high negative impact, as there is likely to be overlap between construction periods of this Project and the Alpha Coal Project. Transportation of goods can also reduce the number of tourists passing through Alpha, as they try to avoid the heavy vehicle usage of the highway, but this has been assessed as medium as many of the tourists in the region are travelling for extended periods and have more time to reach their destination. The Project will use the Communications and Community Engagement Plan to inform the community about traffic movement. These issues will also be addressed in the Road-Use Management Plan, which will be developed in Phase 2 of the SIMP. The Proponent will consult with other project proponents and local landholders about their freight timetables and requirements in an effort to coordinate wherever possible.

There is also potential that the establishment of the mining industry in the region would result in increased competition for labour. This was ranked as a medium negative. The higher wages in the mining industry may result in other employers having to increase their wages resulting in higher costs and profit reductions. There is also potential for higher staff turnover as people use other industries to gain experience required for employment in the mine. The Communication and Community Engagement Plan will be the primary mechanism for mitigating this potential impact. The Project will provide ongoing opportunities for other businesses to advertise vacant positions, supporting the recruitment process. The Proponent will also develop a number of recruitment policies in consultation with the BRC and local stakeholders including anti-poaching strategies.

As it currently stands, the Project presents a number of opportunities for local business to benefit through the provision of services (e.g. supply of beef to the accommodation village, and transportation services) and materials. This has been ranked as a high positive impact, as these opportunities plus those that will be available as part of the Alpha Coal Project, represent a significant business opportunity. The Proponent will adopt local procurement strategies which preference local organisations where possible. The SIMP will monitor the use of local business in goods and service provision to the Project.

#### 20.5.1.9 Income and Cost of Living

##### Baseline

The following key points on the income and cost of living of BRC were identified (OESR, 2010c):

- At the time of the 2006 Census, there were 1,065 persons aged 15 years and over in BRC who stated their gross individual weekly income was less than \$400 (42.1% of all persons aged 15 years and over).

At the time of the 2006 Census, the median weekly individual income for persons aged 15 years and over who were usual residents of Alpha (State Suburb) was \$469, compared with \$435 in BRC. The median weekly household income was \$865, compared with \$800 in BRC. The median weekly family income was \$1,048, compared with \$1,041 in BRC (ABS, 2006c).



### Impacts and Mitigation

As it currently stands the Project is expected to have more positive impacts on income and cost of living than negative ones. There is potential for increases in cost of living, particularly relating to housing and accommodation; this has been assessed as a medium impact. The higher wages in mining have the potential to push wages up in other industries; however, this has been assessed as a low negative because the majority of employees are expected to come from outside of the local study area (see Section 20.3.1.1 and 20.3.2.2).

Conversely the increased wages associated with mining as a result of the Project have the potential to have a high positive impact. The limitation on this is the number of people from the local area who are anticipated to be employed on the Project. Associated with higher incomes comes greater spending capacity. This in turn has the potential to attract new services to the area, considered to be high potential impact.

The primary mechanism for mitigating the potential impact of rising housing costs in and around Alpha will be the Communication and Community Engagement Plan and the SIMP. House prices will be monitored and casual factors determined; further mitigation strategies will be explored within the SIMP. The Proponent will also adopt a local procurement and recruitment policy to maximise the benefits of the higher wages in the community. Opportunities to provide financial planning services will also be considered, and the SIMP will identify monitoring measures to track wages in the regional area.

#### 20.5.1.10 Governance

##### Baseline

The following key points on the governance of BRC were identified (OESR, 2010c):

- At the time of the 2006 Census, there were 50.0% of all occupied private dwellings in the region with an internet connection;
- BRC covers an area of approximately 53,677.3km<sup>2</sup> (3.1% of the total area of Queensland); and
- The BRC is made up of a Mayor and six Councillors.

BRC lies within the jurisdiction of the Central West Regional Plan, a statutory long-term strategic framework covering Barcaldine, Blackall, Tambo and Longreach Regional Councils. The plan recognises the potential for significant growth in mining in the Galilee Basin, particularly around Alpha, and the potential increases in demand for housing as well as medical, dental and social services.

The Plan highlights the Queensland Government's Sustainable Resource Communities Policy, developed by DEEDI. The policy focuses on resource communities, where rapid development resulting from the resources boom has had significant impacts on community infrastructure and services, and on the social structure of local and regional communities.

The policy outlines a partnership between the state government, the Queensland Resources Council (QRC), local government and the Local Government Association of Queensland (LGAQ).

Key initiatives of the policy include:

- Coordination of responses to cumulative social impacts and regional issues through the partnership group;



- Improved planning processes to strengthen regional land use planning and infrastructure coordination; and
- Minor legislative amendments that require the establishment of social impact plans for all new mines and major mine expansions, as part of social impact assessment processes.

The agreement is aimed at strengthening links between all levels of government. It will improve the guidelines around social impact assessment that will govern all new major mines and expansions.

### **Impacts and Mitigation**

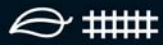
The Project is likely to result in increased demand for health and emergency services, which will likely cause reduced service levels for the current population. The extent of this increased demand will be dependent on the level of population growth and the strategies adopted by the Project to manage health and emergency services for their operations. The failure of service providers to deliver the additional health and emergency services that may be required has been assessed as having the potential to have high impact on the community. To mitigate these impacts, the Proponent will establish an on-site clinic at the Project site and will engage with emergency and health service providers as well as investigating options to enter into a direct contract with QAS for emergency services to service the Project. Conversely if the delivery of required additional services is achieved the potential impact will be a medium positive. The extent of service delivery improvement will be dependent on the level of population growth experienced in Alpha as a result of the Project. The Project will also actively support BRC in their efforts to obtain funding and grants from State and Commonwealth governments. The Proponent will identify strategies to develop open and transparent relationships with local government and the community through the Communications and Community Engagement Plan and the Hancock Consultative Committee.

Development of the regional council is based on agreed long-term strategies and plans. It will be critical for the Project to effectively engage with planning processes at both a regional and local level to ensure that population trends as a result of the Project will be considered in determining infrastructure, service and community development programs. The likely impact of not doing this effectively could result in these plans failing to recognise population and social trends related to the Project and therefore not adequately addressing potential social impacts. These impacts have been assessed as medium, as it has been assumed that the Alpha Coal Project will be successful in engaging in regional planning processes and as such many of the emerging needs will have been considered.

The Proponent will have a Community Liaison function that will be responsible for developing open and transparent relationships with relevant bodies and ensuring the Project is effectively engaged in these types of processes. As discussed in Section 20.5.1.2 the SIMP will monitor population change and document strategies based on trends identified. The SIMP will also identify responsibilities of all parties in delivering funding and services to the community based on these strategies and document appropriate monitoring measures to ensure this is being performed effectively.

Population growth as a result of the Project may provide a larger pool of potential employees for BRC and other local businesses/services. The availability of new skills may lead to council and other businesses engaging additional staff. This has been assessed as a medium positive impact.

It is anticipated that the Project will lead to the generation of additional funds for the BRC. This potential revenue increase is expected to come from the increased rate collection associated with



population growth in and around the Alpha area. This additional revenue can be used to support enhanced service delivery and to improve council owned infrastructure. The magnitude of this impact is expected to increase slightly with the addition of each new project. The Proponent will use the Project Communications and Community Engagement Plan to coordinate goals, objectives and outcomes with local government as a means of enhancing this potential impact.

#### **20.5.1.11 Primary Infrastructure and Access**

##### **Baseline**

The following key points were identified about primary infrastructure in BRC:

- Alpha has limited electricity supply and regularly experiences blackouts and brownouts;
- Water in Alpha is sourced from a sub-artesian supply, heavily reliant on bores. Despite heavy drilling over recent years, capacity has not increased significantly;
- There is no sewerage system in Alpha;
- The Telstra 3G network services Alpha; however, reception is limited away from the Capricorn Highway; and
- The current Alpha aerodrome is adequate for landing Dash-8 Q300 and Fokker F50 planes. BRC have proposed an upgrade that will increase the capacity of the aerodrome, making it large enough to land jets. If this proceeds, the potential aircraft capacity at the Alpha aerodrome will be greater than the Emerald airport.

Having adequate infrastructure and facilities was seen by residents as crucial to the future of the community and a core role for the BRC. People wanted to retain and maintain existing infrastructure and make key improvements based on available funding (Barcaldine Regional Council, Community Plan, 2009).

##### **Impacts and Mitigation**

As it currently stands, the Project is expected to result in increased road usage of the Capricorn Highway around Alpha which will result in associated safety issues relating to traffic and maintenance. This impact has been assessed medium during feasibility, very high during construction and high during operation of the Project, prior to the application of mitigation including road safety programs, routine maintenance and coordination with emergency services providers. Mitigation is anticipated to reduce the feasibility and operations impact rankings to medium; however, construction is likely to remain high due to vehicle volumes and the likely size of some loads. Upgrading or maintaining this road is not a part of the Project description; however, the Proponent will support BRC efforts to obtain required funding or discuss with DTMR regarding additional road upgrades. In ongoing consultation with BRC the best route for transporting goods from Alpha to the Project site will be confirmed. Upgrading the Alpha–Clermont Road is not part of the current project description; however, the Proponent will support council efforts to obtain additional funding for this. An upgrade of the Alpha–Clermont Road will be a very high positive to the community, improving safety and reducing travel times. The SIMP will identify means for monitoring the level of Project traffic use on local roads and identify benchmarks at which specific actions will be taken.

There will be a requirement to transport flammable and dangerous chemicals, explosives and other materials to the mine site for use in the construction and operation of the mine. As in the case of



transporting of any dangerous goods there is a risk that there may be a spill, fire or explosion that can cause safety hazards for the surrounding communities. While it is considered unlikely that such an accident will occur, the resultant magnitude will be high on the affected persons and community. As such, this potential impact has been ranked as high. Stringent policies and procedures governing the transportation, storage and use of dangerous materials, flammable chemicals and explosives will be adopted to mitigate the potential for an accident. In addition a comprehensive emergency response plan will be developed in consultation with police and other emergency services to minimise the impact in the event of an accident and ensure a coordinated response.

The availability of electricity, water and sewerage in Alpha are limiting factors for population growth. Currently supplies are almost at maximum capacity and without improvement will struggle to cope with additional development. This Project, as well as the Alpha Coal Project, are seen by many in the community as the impetus for much needed upgrades, although providing this infrastructure to the community is not a part of either Project description. However, this potential positive impact has been ranked as low, as it has been assumed that the Proponent will have already discussed infrastructure opportunities for local economic and community development with council, as a part of the Alpha Coal Project.

An upgrade of the Alpha–Clermont Road (if it were to occur) would improve access from Alpha to the coast via Clermont and Mackay. The cumulative effects of the Alpha and Kevin's Corner Projects and the continued development of the Galilee Basin may provide the required impetus to extend this upgrade through to Clermont. While this will still be a very positive impact of the Project on the local and regional community, the magnitude is considered to be lower than for the Alpha Coal Project (i.e. assessed as a medium impact), given that there will already be the benefit of upgrading the first 50km of the road. The potential for improved access to Alpha has been assessed as medium.

Currently residents who live away from the Capricorn Highway have poor telecommunications and rely on satellite phones. Adequate communication will be required throughout the Project site which will involve the construction of new receivers and mobile towers. This could have a medium impact on the local community by providing them with improved communication, as it is assumed that the Alpha Coal Project will already likely have undertaken some improvements to develop communication infrastructure. To maximise this impact, the Proponent will consider placing these receivers in locations where they will best benefit the community wherever possible and will support BRC to extend the benefits.

The extent of these benefits and any upgrades or improvements to services will be dependent on population growth. As discussed in Section 20.5.1.2, the SIMP will identify benchmarks and processes for closely monitoring population growth in Alpha and will document a range of strategies based on trends identified.

## 20.6 Conclusions

Key impacts attributed to the regional study area were primarily positive and focussed around employment, and business opportunities. The regional study areas (IRC and CHRC) are currently experiencing moderate population growth (Emerald) and stability (Clermont), and are both expanding economically due to increased opportunity. The Project has the potential to support current population and economic trends, and potentially amplify these trends in Emerald and in the Clermont area, particularly if access to the Project site is improved and transportation options examined. These



impacts (both positive and negative) are deemed likely to be manageable through a productive and proactive relationship between the Project and the councils through the SIMP and the HCC. Inclusion of other key stakeholders including health, emergency, social and housing service providers, etc., at key discussions should provide sufficient interaction to manage impacts.

Barcaldine Regional Council is anticipated to experience both positive and negative impacts. The positive impacts are upgrades to infrastructure or assistance on upgrades to infrastructure, an increased priority profile from the State and Commonwealth government, and potential increases in revenue/rates from a higher population. There is potential that the council may lose staff to the Project. Council has expressed an awareness of this potential, though it is obviously not a desired outcome. There is also the potential for the council to attract new staff and/or new skill sets, particularly through partners of mine employees who may relate to the area.

The Project is far enough away from the community of Alpha not to have direct impacts associated with the accommodation village housed workforce. There are also significant limiting factors in the community that reduce the likelihood of an unmanageable population boom (e.g. current lack of essential and social infrastructure). The absence of these services limits the likelihood of a significant population increase, while it also means that any additional population will strain an already stretched service system.

The Project has been designed to limit impacts on the community by locating the workforce in an accommodation village on the Project site, and by planning for a FIFO workforce. However, it is likely that there will be some individuals/families who decide to relocate to the area to take up work with the Project. Council is actively seeking to reduce the limiting factors, so as to increase the liveability of the town, and make it a more desirable place to live. The SIMP will provide a mechanism to monitor population growth, and through a consultative process, will benchmark levels of service for a range of potentially impacted social infrastructure types to key population levels.

All three councils acknowledged the potential for other issues to manifest like drug and alcohol use/abuse, and domestic violence. These were seen to be issues often attributed to miners; however, further discussion and analysis did not identify a rate of occurrence above the background societal levels. Regardless, it is important to recognise that any rise in population, and changes in a community have the potential to increase these issues, and any level of abuse and violence should be addressed. The Proponent intends to implement random drug and alcohol testing for employees as per relevant standards and will explore the availability of counselling service opportunities. The Proponent will also work with key stakeholders including councils, social service providers and emergency service providers to address the potential for increased substance abuse and violence in the Project affected communities.

The Project will link in with the already established (as part of the Alpha Coal Project) Hancock Consultation Committee (HCC). This forum will enable the Proponent to work with councils on the development and implementation of Phase 2 and Phase 3 of the SIMP.

The draft SIMP (presented with this EIS – see Volume 1, Section 29) is a template designed to be refined with input from key stakeholders, including local government. The purpose of the SIMP is to establish the roles and responsibilities of the Proponent, government, stakeholders, and communities for the mitigation and management of social impacts and enhancement of benefits and opportunities that may be associated with the construction, operation and decommissioning of the Project. The specific mitigation strategies for each of the key impacts identified within the SIA will be further

developed within Phase 2 of the SIMP, as will overarching management strategies focussing on key themes.